

**THE TOY LIKE NATURE:
ON THE HISTORY AND THEORY OF ANIMATED MOTION**

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This dissertation examines some key assumptions behind our prevailing idea of animation, arguing that our idea of animation is not, as is often implicitly assumed, an ahistorical category of manipulated imagery, but the result of a complex network of contingent processes. These assumptions, from the aesthetic end, largely emerged from the postwar rise of figurative (or noncartoon, nonabstract) animation—a “new era” which critic André Martin characterized as “marked by the widest possible range of techniques and processes.” From the other end, animation is tied to widespread assumptions from science that assert the biological, automatic nature of visual illusion. Animation’s unique status as a medium of visual movement that can arise from any kind of material (drawings, puppets, computer graphics, etc.), thus yields a paradox that I call “animated automatism”: the fact that, in order to assert its open-ended freedom as an art form, animation must acknowledge the reductive mechanics of perception.

The dissertation examines these tensions between aesthetics and science by weaving together moments in the history of figurative animation with moments in the history of animation’s theorization, arguing for the importance of oft-neglected thinkers as animation theorists in the process. Chapter one analyzes philosopher Stanley Cavell’s remarks on cartoons in context with the rise of figurative animation *against* cartoons, and against the emergence of film studies as an academic discipline. Chapter two analyzes a significant overlap between the

methods of animator Norman McLaren and Gestalt psychologist Albert Michotte to argue that the history of figurative animation shares protocols of optical testing with the history of the study of perception. Chapter three examines two major theorists of early trickfilms, critic Rollin Lynde Hartt and poet Vachel Lindsay, as proto-animation theorists who found early cinema's significance in the push-and-pull between illusion and explanation. Chapter four reads Michael Barrier's 1970s cartoon journal *Funnyworld* against the celebrated practice of John and Faith Hubley to indicate a modernist crisis in the understanding of animation. Two brief excurses examine the assumptions behind Michotte and 1960s/70s art critic Annette Michelson's neglect of animation as a category of film.

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Introduction

1. Addressing the animation problem

This dissertation is about the idea of animation as a special type of film. We tend to take the idea of animation for granted as meaning something like, *any kind of movement on a screen that is created frame-by-frame rather than recorded, or, movement present in a projected images that was not present in any real-time original act of recording*. Such a definition implicitly asserts two things at once. First, we assume that certain manipulations of figures between frames of film will actually *produce* movement. Second, we assume that it makes intuitive sense to label *any* technique which does this with the same umbrella term “animation” (that is, drawings on celluloid, puppets, sand on a sheet of glass, and computer graphics are not all qualitatively different types of filmmaking but special instances of the general class “animation”). When we do this, we make animation out to be almost a natural kind. It appears before us all at once as something already intact and complete, a timeless set of conditions waiting to be discovered. My dissertation challenges the apparently obvious logic that binds these two assumptions together. What we tend to reify into a self-evident, ahistorical category is actually the result of complex and contingent processes.

There are some definite and urgent reasons that such an account of animation is currently needed, which involve what we might call “the animation problem” emerging more generally in film studies. Over the past several years, animation has not only blossomed into its own subfield of study (with a number of scholarly journals, monographs, and edited collections devoted to its various permutations) but has come to be seen as partly constitutive of film itself. The movies,

which once guaranteed a certain cohesive relation to reality by the automatic processes of photography, have begun to look and act more and more like animation. Film scholars, in a wave unprecedented since film studies first coalesced as a discipline, are revisiting the foundational question of what cinema *is*. The general consensus of these studies is that any current conception of cinema must include, or at least respond to the challenge of, animation.¹ The proliferation of computer-animated feature films, the ubiquity and fluidity of special effects, the encroachment of digital video upon the dominance of analog film—all these things demand accounting for. We find ourselves in a situation reversed from the assumptions of an earlier age, when film theories could seemingly exclude or ignore animation altogether.²

It stands to reason that, with animation emerging as such an important problem, more specific accounts of the term “animation” and its implications would find an easy way into the growing discussions on cinematic specificity. Yet, by and large, this has not happened. Animation studies remains strangely apart from the range of otherwise extraordinarily acute and sophisticated investigations into cinematic ontology, spectatorship, and classical film theory. “Animation” as a category gets taken up in fits and starts, only to be boxed into or out of the *real* source of interest in such debates: the divide between analog photography and digital film. Scholars like D.N. Rodowick, Rosalind Krauss, Mary Ann Doane, and Francesco Casetti, in the interest of drawing up a neat periodization between an age of film dominated by photographic

¹ For examples see Lev Manovich, *The Language of New Media* (Cambridge: MIT Press, 2001); D.N. Rodowick, *The Virtual Life of Film* (Cambridge: Harvard University Press, 2007); Tom Gunning, “Moving Away from the Index: Cinema and the Impression of Reality,” *differences* 18.1 (Spring 2007), 29-52; Mary Ann Doane, “The Indexical and the Concept of Medium Specificity,” *differences* 18.1 (Spring 2007), 128-152; Gertrud Koch, “Carnivore or Chameleon: The Fate of Cinema Studies,” *Critical Inquiry* 35.4 (Summer 2009), 918-928; and Francesco Casetti, “Sutured Reality: Film, from Photographic to Digital,” *October* 138 (Fall 2011), 95-106.

² For some of the more notorious examples of this, see Siegfried Kracauer, *Theory of Film: The Redemption of Physical Reality* (Princeton: Princeton University Press, 1997), and Stanley Cavell, *The World Viewed: Enlarged Edition* (Cambridge: Harvard University Press, 1979).

indexicality or realism and an age dominated by digital manipulability, have consistently reduced animation's possibilities to a place "before" or "after" the divide.³ In other words: *animation is only of interest to film theory inasmuch as it speaks to problems of digitization and not as a matter of investigation in its own right*. The logic begins as an admirable desire to think more inclusively about film, based on the notion that images appear creative or iconic today in a way seemingly presaged by animation; but it ends up reifying the digital at the expense of the category to which it is compared. In the feverish desire to account for animation as a kind of cinema, film studies thus ironically risks running into the very problem it is attempting to remedy: relegating animation to a mere either/or example, additional data to be classified, lacking in specificity. More examples will not help here, because whatever kinds of animation we might offer can readily be subsumed under the same kind of manipulability as digital imagery. Adding new classifications to the schema will not help either, since doing so would simply separate animation off. Reversing the terms of the schema, as Lev Manovich and Alan Cholodenko have done in polemically arguing that *all* cinema is animation, merely trades out one black box for another.⁴ Rather, the schema itself needs to be problematized. What's needed

³ Rodowick, in prioritizing the indexical/digital divide, quickly splits animation's history into cel animation (which takes photographs of drawings) and CGI imagery (which needs no camera); see *Virtual Life*, 121-122. Krauss writes that the current landscape of cinema, in which computers have taken over photographic processes, effectively collapses the difference between "'movies' and 'cartoons,'" see Krauss, "'The Rock': Kentridge's Drawings for Projection," *October* 92 (Spring 2000), 32. Doane relegates animation's possible relevance to medium-specificity to a footnote, arguing that it can easily be considered "indexical" in the same way as photographic images; see "Indexicality," 148-9N5. Casetti writes: "Digital cinema is not condemned to the status of animation..." See "Sutured Reality," 96. Tom Gunning has provided a notable exception to this rule; see "Moving," especially 34 and 44-46.

In these debates, it matters a great deal whether the older age is defined by being "indexical," "analog," or "realistic," and I will not rehearse those distinctions here. Suffice it to say that, while each of these positions makes its own original argument about the nature of the divide, animation as frame-by-frame movement remains secondary to that divide.

⁴ Manovich, in one of the most-quoted passages of contemporary film theory, states that, "*born from animation, cinema pushed animation to its periphery, only in the end to become one particular instance of animation.*" See

is a new, more self-conscious way of thinking about animation that does not immediately reduce it or quarantine it: a *problematic*.

2. Problematizing figurative animation

By the (somewhat awkward) term “problematic” I simply mean a loose cluster of theoretical and historical encounters with a set of related problems, or a set of demonstrations that a phenomenon *is* problematic. This dissertation is written in the spirit other recent works that can be considered problematics of particular kinds of animation. Esther Leslie’s *Hollywood Flatlands*, in its study of encounters between European intellectuals and cartoons, makes problematic the relation between the low-culture anarchism of cartoons and the revolutionary political ambitions of critical theory; for Walter Benjamin, Theodor Adorno, and others, cartoons provoked questions that proved central to their ideas of aesthetics and politics, without providing any definitive answers.⁵ Thomas Lamarre’s *The Anime Machine* ostensibly claims to be a “media theory of animation,” but I would argue that is more accurately considered a problematic of the relation between popular Japanese animation and the speeds and flows of modern Japan.⁶

Similarly, my own study is a problematic that relates our two commonly-held assumptions about animation—that it can take any material form as long as it satisfies the

The Language of New Media, 302, original emphasis. Cholodenko has insisted that film is a special type of animation since the 1990s, and puts the matter most forcefully in “The Animation of Cinema,” *The Semiotic Review of Books* 18.2 (2008), 1-10.

⁵ See Esther Leslie, *Hollywood Flatlands: Animation, Critical Theory, and the Avant-Garde* (London and New York: Verso, 2002). See also Miriam Hansen, “Of Mice and Ducks: Benjamin and Adorno on Disney,” *South Atlantic Quarterly* 92.1 (Winter 1993), 27-61.

⁶ See Thomas Lamarre, *The Anime Machine: A Media Theory of Animation* (Minneapolis: University of Minnesota Press, 2009).

condition of the illusion of motion—to a particular kind of animation, which Thelma Schenkel has called *figurative animation*.⁷ Figurative animation sits in the long grey area between the conventional cartoons of Disney or Warner Brothers and the avant-garde abstractions of Len Lye or John Whitney. It might be (very loosely) defined as broadly representational or iconographic animation with strong formalist tendencies. It is something like an animated equivalent of art cinema: more experimental than traditional narratives, but not radically difficult tests of the senses or the attention. There exists a functioning canon of figurative animation, which includes such filmmakers as Lotte Reiniger, Jan Lenica, John and Faith Hubley, Alexander Alexeieff and Clare Parker, Jiří Trnka, Berthold Bartosch, Yuri Norstein, Caroline Leaf, and Norman McLaren. Like art cinema, figurative animation gained the attention of an emerging international film culture through film festivals and film societies. Like art cinema, figurative animation largely distinguished itself as an antidote to the formulaic appeals of its commercial counterpart: it asserted itself as *art* where cartoons were merely *amusement*. And, like art cinema, figurative animation played a major part in setting the parameters for how the emerging tradition of film scholarship would define the possibilities of its medium. But, while the legacy of art cinema has survived more or less intact in subsequent film scholarship, figurative animation has been almost completely forgotten. Schenkel's dissertation and Suzanne Buchan's recent book-length study of the Quay Brothers are the only sustained scholarly studies of this historically unique form of which I am aware.⁸ This dissertation is not a synoptic history of figurative animation, but much

⁷ See Thelma Schenkel, *Exploring the Cinema of Figurative Animation, with Special Consideration of the Work of John and Faith Hubley and Jan Lenica*, PhD. dissertation (New York University, 1977).

⁸ See Suzanne Buchan, *The Quay Brothers: Into a Metaphysical Playroom* (Minneapolis: University of Minnesota Press, 2010). Various nonacademic books celebrating figurative animation have cropped up semi-regularly since the 1960s. For some examples see Roger Manvell and John Halas, *Design in Motion* (New York: Hastings House, 1962); Ralph Stephenson, *Animation in the Cinema* (London: A. Zwimmer, 1967); Robert Russett and Cecile Starr,

of the following pages will be devoted to filling various gaps in the historical record regarding the importance of figurative animation—its dialectical challenge to cartoons, its efforts to establish an international community of animators, its attempts to secure a popular audience, and its overt debts to modernism. The National Film Board of Canada’s animation division (NFB) and the *Association Internationale du Film d'Animation* (the International Association of Animated Film, usually abbreviated ASIFA) stood among the important institutional vehicles in the production and dispersal of figurative animation.

A renewed attention to figurative animation is a powerful historical corrective to the tendency to lump the animation problem into a clean division between cel animated cartoon shorts and CGI feature films. This division is extremely common in discussions of cinematic ontology. It creates the misleading impression that the historically-dominant form of cartoons was gradually replaced with a new norm of computer graphics in a way that mimics the replacement of photographic film with digital video. Such a narrative implies that we did not need a popular term of “animation” to replace “cartoons” until Pixar’s rise to fame; the historical record indicates that this is plainly not the case. The Academy of Motion Picture Arts and Sciences’ (AMPAS) award category for “Best Cartoon” was changed to “Best Short Subject, Animated Film” in 1971; by the end of the 1970s the rule included a laundry list of possible techniques that counted as animation.⁹ Likewise, animation was a widely-noted counterexample

Experimental Animation (New York: Da Capo, 1976); Ronald Holloway, *Z Is for Zagreb* (London: Tantivy Press, 1972); Liz Faber and Helen Walters, *Animation Unlimited: Innovative Short Films Since 1940* (London: Lawrence King, 2004); and Clare Kitson, *Yuri Norstein and Tale of Tales: An Animator’s Journey* (Bloomington: Indiana University Press, 2005).

⁹ “[A]n animated film, comedic or serious, may be an original story, an existing story or fable, or it may simply explore a mood or thought. It usually falls into one of two general fields of animation: character or abstract. Some of the techniques of animating films include cel animation, computer animation, stop-motion, clay animation, puppets, pixillation, cut out, pins, camera multiple pass imagery, kaleidoscopic effects & drawing on the film frame

to photographic ontologies of film in 1970s film theory.¹⁰ The first edition of Gerald Mast and Marshall Cohen's film theory anthology, which became a standard textbook for film classes, even contained two essays on animation.¹¹ (The essays were pulled from subsequent editions.) In other words, *animation emerged as a challenge to (primarily realist) film theory at roughly the same time that it emerged as a challenge to cartoons*. Figurative animation denotes a shared and now-overlooked moment between the history of film studies and the history of cartoons.

3. From animation to animated motion

There is a theoretical reason for a focus on figurative animation as well: figurative animation is the place where the impression of motion is most clearly secured across multiple techniques of creating movement, the place where the impression most forcibly asserts its autonomy. When ASIFA valued McLaren, the Hubleys, Trnka, and Alexeieff and Parker as "animation" over Disney's "cartoons," the organization was arguing for the incredible variety of techniques that could create movement on a screen. The Hubleys drew in blotchy and loose sketches, uncontained by hard outlines, and often drawn with many kinds of implements (watercolors, pens, markers); Trnka was best-known for working in delicate model puppets;

itself." See *Rules for the Conduct of the Balloting, 52nd Annual Academy Awards, for Achievements during 1979* (Los Angeles: Academy of Motion Picture Arts and Sciences, 1979), 19.

¹⁰ For examples see Gerald Mast, "What isn't Cinema?", *Critical Inquiry* 1.2 (December 1974), 373-393, and Douglas Lackey, "Reflections on Cavell's Ontology of Film," *Journal of Aesthetics and Art Criticism* 32.2 (Winter 1973), 271-273.

¹¹ See Gilbert Seldes, "The Lovely Art: Magic" and Joe Adamson, "Suspended Animation," in Gerald Mast and Marshall Cohen, eds., *Film Theory and Criticism* (New York: Oxford University Press, 1974), 379-390 and 391-400, respectively. More properly speaking, the essays are on *cartoons*: on the change in dominant cartoon style from 1930s Disney to 1950s UPA, and the banalization of contemporary cartoons (of the Hanna-Barbera variety).

Alexeieff and Parker's films looked like continually-altered engravings through patterns of light and shadow pressed into a screen full of headless pins; McLaren perfected over a dozen techniques throughout his life. Animation of this period had a unique power to continually renew itself by discovering new techniques. When 1970s film theorists objected to the narrowness of photographic realism, they were not merely pointing to cartoons but to the open-ended variety of means by which movement could be achieved onscreen.

Nonetheless, the category of "animation" did not cover *everything* that wasn't live-action cinema. Namely, an animator was (and is) not quite the same as an "avant-garde," "experimental," or "abstract" filmmaker. (Hence, Douglas Lackey feels it necessary to clarify his objection to realist film theories on the grounds that they "do not apply to animation *or* to abstract films..."¹²) Fernand Léger and Man Ray had included moments of frame-by-frame manipulations of paper cutouts or objects to create recognizable movement in things where there should have been none, but this did not necessarily make them *animators*. Likewise, rapid cutting, reverse motion, and other such manipulations of the film strip do not tend to be intuitively recognizable as "animation." One can, presumably, make an argument that a formalist film (like Ken Jacobs's *Tom, Tom the Piper's Son* (1969)) or a flicker film (like Peter Kubelka's *Arnulf Rainer* (1960)) nominally counts as "animation," on the grounds that movement or change occurs in frame-by-frame patterns that correspond to no real-world event: the frame changes from black to white, the illusion of motion is brought to the forefront of attention and made strange, etc. But it's unclear what to do with such a claim, because the sense of "movement" being evoked is so different than it is in the case of animators. Calling both cases "animation" or "movement" would get one no closer to a description of the particularities

¹² Lackey, 271, emphasis added.

of each. To label the avant-garde a kind of “animation” seems to limit its purposes or miss its point. Some filmmakers, like Len Lye and Robert Breer, can sit comfortably in both camps. But it’s worth noting that these cases are extremely rare, and for good phenomenological reasons.

Figurative animation is a kind of prototype or paradigm case of animation, for the reason that it deals primarily in what I’m calling (after Norman McLaren) *animated motion*.¹³ This is a kind of motion distinct from *cinematic motion*, or a more diffuse sense of *duration* or change.

Tom Gunning’s recent call for renewed investigation into a cinematic aesthetics of motion includes all three of these types of motion,¹⁴ but it is worth distinguishing them from each other, as they tend to be phenomenally distinct and raise their own unique sorts of problems.

“Cinematic motion,” for my purposes, occurs when a *recorded* temporal event coheres, in real time or in distorted time, in a corresponding *projected* temporal event. When Cary Grant walks across a soundstage, the camera breaks his movement apart into a series of frames, which are then restored as movement in projection. Slow motion, time-lapse photography, and reverse motion, when recognizable as such, are still intuited as distorted versions of this restoration.

When film scholars discuss whether or not film is an illusion, they are almost invariably talking about cinematic motion. Discussions of cinematic motion tend to revolve around the opposition between photograms and projected movement, centering on the moment when a series of

¹³ *Animated Motion* (Norman McLaren and Grant Munro, 1976) is a five-part instructional series designed to educate animators on the uses and effects of particular kinds of motion. Essentially, the series covers what mathematical combinations of distance a figure covers between frames will yield what kind of motions. McLaren and Munro offer a typology of movement (constant, accelerating, decelerating, and irregular) and schematize various effects for which each type of movement is typically used.

¹⁴ See Gunning, “Moving Away from the Index,” 37-48. The taxonomy is mine; Gunning calls all of his examples of movement or change “cinematic motion.” An additional type of “movement,” which Gunning discusses but which I do not discuss in detail in this section, is *metamorphosis*. Whereas movement, strictly speaking, involves a change in location, metamorphosis requires a change in a figure’s *form*. Metamorphosis is also a central pleasure of animation, especially in cartoons—usually discussed, as Gunning does in his essay, as an instance of the plasmatic, a topic I cover in the next section of this introduction.

projected photographs *stops* being seen as photographs and *starts* being seen as a single dynamic event; the discussion is often pitched in terms of psychological processes like persistence of vision or the *phi*-phenomenon (ϕ). *Duration*, or change, is characteristic of any temporal art, wherein elements are serialized into a dynamic whole. The musical analogy in film theory centers around this kind of motion, as do discussions of suspense; it is not a directly-observable kind of motion but a felt progression in time, usually discussed in terms of memory and expectation.¹⁵ (Note that these two kinds of motion inevitably overlap and intertwine, but are not identical or reducible to each other.)

What I'm calling *animated motion* is often brushed over as a special case of cinematic motion; usually the animator is simply thought to aesthetically exploit the difference between stillness and movement, a particularly clear example of persistence of vision or ϕ . But animated motion is much more than this. Animated motion has two conditions: first, the movement in question applies to one or more figures onscreen, recognizable as being created frame-by-frame (not recorded and restored). Second, the figures' movements onscreen must be seen as having a particular self-directed or mechanical force. Animated motion is not a mere change of location; it has a special character, which we liken to objects which move in our own world. As such, it is subject to special restrictions of distance and timing, which place it beyond the realm of explanation by persistence of vision or ϕ . Φ may be able to explain how a square moving downward across a screen looks like movement, and not merely a succession of positions; but it cannot explain how, depending on where the square is placed and when, it can appear to *fall* downward, *float* downward, *stutter-step* downward, and so on. Abstract animators like Breer

¹⁵ For a detailed discussion of the musical analogy see David Bordwell, "The Musical Analogy," *Yale French Studies* 60 (1980), 141-156.

and Lye, more often than not, place their figures in relations which resist being recognizable; which is to say that they are animators who are notable for absolving the vocabulary and goals of animated motion.¹⁶ This is what I take Andrew Johnston to mean in his recent study of abstract animators, when he argues that abstract animation “does not attempt to unfold new sets of relations between subjects and objects in a fantastical world, but instead denies the projection of a world entirely and puts into motion rhythms of line, shape and color that create ... ‘pictures of nothing.’”¹⁷ Figurative animation does not create pictures of nothing, but pictures of a paradoxical *something*.¹⁸

4. Animated motion and the plasmatic

From the distinction made above, might be tempting to claim that figurative animation *does* offer a “fantastical world” of sorts. Such a claim would place figurative animation much closer to cartoons than its history would indicate. The promise of a fantastical, animistic world is the single most frequently-invoked theoretical concept in animation studies, and its origin is found in celebrations of cartoons. This promise speaks to the pleasures of metamorphosis and

¹⁶ In a different vein, the “abstract” quality of Oskar Fischinger’s movements is not unrecognizable, but it tends to be rigid and uniform, seemingly subject to no suggestions of force; they appear to float in a frictionless universe.

Additionally, some recognized avant-garde filmmakers have dealt in recognizable figures and/or animated motion, such as Stan Vanderbeek, Lawrence Jordan, and the later work of Harry Smith. My point here is not that the avant-garde and figurative animation are rigid and mutually-exclusive categories, but that noncartoon animation cannot be considered synonymous with the avant-garde. Considerations of the uniqueness of figurative animation are often lost in the gap between the cartoon and the avant-garde or the abstract.

¹⁷ Andrew Johnston, *Pulses of Abstraction: Episodes from a History of Animation*, PhD. dissertation (University of Chicago, 2011), 3.

¹⁸ This kind of motion might also be fairly called *figurative* motion, as it tends toward (without necessarily resolving into) representation.

anthropomorphic objects and animals found in Disney's 1930s work. Audiences around the world adored Disney's dazzling colors (the first use of three-strip Technicolor), his synchronously incongruent sounds, the personality with which even the most mundane of animals or objects (like insects or clocks) could seemingly command their own fates, and the stunningly simple rapidity with which bodies could change form. American critic Gilbert Seldes and art historian Erwin Panofsky hyperbolized these pleasures.¹⁹ The author generally credited with best articulating these pleasures is Soviet filmmaker-theorist Sergei Eisenstein. Eisenstein was entranced with Disney's cartoons, finding in them a distilled purity of artistic form and grace, almost a basic force of life itself unfettered by modern strictures. He called the basic appeal of these cartoons *plasmaticness*, which he defined as "a rejection of once-and-forever allotted form, freedom from ossification, the ability to dynamically assume any form."²⁰

Significantly, Eisenstein emphasizes the *freedom* promised by the cartoon. In thematizing the living qualities of things wherein no such qualities should exist, the plasmatic makes for an appealing way to describe or explain animation more generally, as the ability of the animator to impart the *anima* (the breath of life) to anything at all. Such an interpretation would make the plasmatic sense of freedom isomorphic with the creative freedom of the animator. However: strictly speaking, the plasmatic freedom of cartoons is of a very specific kind, the freedom of a body being able to alter itself and wander at will through a world which is understood in some attenuated way as being physical.

¹⁹ See Gilbert Seldes, "Disney and Others," *New Republic*, 71.914 (8 June, 1932), 101-102; and Erwin Panofsky, "Style and Medium in the Motion Pictures," in Gerald Mast, Leo Braudy, and Marshall Cohen, eds., *Film Theory and Criticism: Introductory Readings, Fourth Edition* (New York and Oxford: Oxford University Press, 1992), 239-240.

²⁰ Sergei Eisenstein, *Eisenstein on Disney*, trans. and ed. Jay Leyda (London: Methuen, 1988), 21.

We can see the limits of this freedom at work in one of the cartooniest of all cartoons, Chuck Jones's *Duck Amuck* (1953). (Warner Brothers is widely considered to have taken up the mantle of plasmaticness in all its comic anarchic glory when Disney became "cute" at the end of the 1930s.) *Duck Amuck* is a Daffy Duck cartoon which is never able to properly start, because the unseen cartoonist keeps defying Daffy's expectations. A background changes without warning from a farmyard to the Arctic, requiring Daffy to change his costume; Daffy's own voice gets taken away, and a rooster's crow comes out of his mouth when he tries to speak; the top edge of the frame start to collapse under its own weight like a wet cloth ceiling, leaving Daffy to hold it up by his own strength; and so on. The pranks continue to the end of the cartoon, when the cartoonist is revealed to be Bugs Bunny.

Duck Amuck proves that all sorts of things can be done to Daffy Duck that cannot be done to us. The animator – here, Bugs – can seemingly do anything he wants. The formal possibilities of the form of the cartoon are danced around, its limits pushed further than with just about any other Warner Brothers cartoon. Each gag relies on temporarily breaking a rule of some kind; some of the rules apply to our world (we expect to not have our voices taken away at will), some apply to the conventions of cartoons (we do not expect a "The End" title before the end). The gags lay bare the vocabulary of cartoons, and lay bare the potential arbitrariness of those conventions.

However, the cartoon is not itself totally arbitrary in nature. There are at least two kinds of limits to the animator's powers, within the rules of *Duck Amuck*. First: the animator cannot kill Daffy. Daffy will persist through *anything*. The most the animator can do is end the cartoon, which is no different from relinquishing his own powers. Part of the joy that Bugs takes in frustrating Daffy is that any act can be taken back with Daffy left intact. Second: The

animator cannot keep Daffy from being Daffy. It is not beyond Bugs's power to turn Daffy into a different body. It *is* beyond Bugs's power to make Daffy feel *okay* about it. The tricks are not funny in themselves. They are funny because they make Daffy increasingly frustrated, and we know he'll be frustrated because we know what he is like. Daffy's impotent rage can't be taken from him, only rendered more impotent. Bugs doesn't "control" Daffy in the absolute sense of an artist over his drawing, but as a joker who puts him in situations where certain reactions are assured. He can only wield power over Daffy inasmuch as he *knows* Daffy, not inasmuch as he holds the pen.

In plasmaticness, the possibilities of transformation are characteristically *subsumed* to the stable features of an underlying personality. An identifiable character, with anthropomorphic qualities, must take some sort of intentional stance toward his or her body being transformed. Strictly speaking, plasmaticness is inseparable from what is more generally called the American tradition of personality animation. (The history of 1930s Disney, from the first *Silly Symphonies* to the feature films, can be seen as a kind of gradual displacement of metamorphosis at the service of personality.) Cartoons may not carry a consistent set of physical laws, but they do adhere to a consistency of souls. It is only with personality that we can get an impression of animated characters behaving animatedly in an animated world.

Figurative animation tends to use its animatedness to different ends. One of the major themes of this dissertation is that, in fact, the sensuous features of figurative animations frequently yield oddities and inconsistencies that do not fit squarely with an ideal of plasmaticness. The basic appeal of plasmatic cartoons *utilizes* animated motion but does not really *emphasize* it as such; animated motion is rather put to the use of metamorphosis and character, celebrating a kind of interior freedom of a cartoon subject. Figurative animation does

not absolve itself of either of these things, but it tends to reverse the emphasis. Metamorphosis and anthropomorphism do not serve at the pleasure of the animated character, but at the pleasure of the animator who is *making* the figure move and the viewer who is watching the movement. The result is a conglomeration of recognizably worldlike features that do not quite fit together into a “world.” Blobs, circles, newsprint clippings, and other materials move in quasi-recognizable ways but not necessarily in a coherent space. The liveliness of a figure is not immortal or omnipotent; often it is indeterminate or fragile. In many cases, inconsistency is the whole point: it better emphasizes the wonder of animated motion, by preventing us from being able to take it for granted.

We can see these pleasures at work in Norman McLaren and Grant Munro’s *Canon* (1964). *Canon* contains three segments that, in different ways, visualize the principle of melodic layering in a musical canon. Each segment runs more or less as follows: A figure moves across a visual field in a very specific way, with a limited number of steps, corresponding to a melody on the soundtrack. When its choreography is finished, the figure begins to repeat the movement exactly: after a short delay, another identical figure occupies the place the original figure just held (with its own melody), enacting a choreography identical to the original. After a brief delay, *another* figure is added to the field; then another. Despite the increasingly crowded space, the choreography is designed precisely so that the figures never interrupt or touch each other. With each added figure, new and more complex patterns become visible.

This scenario is enacted three different times, by three different methods: first with animated wooden blocks on a chessboard; next, with small caricatured paper cutouts; finally, in live-action with an actor who occupies several spaces at once with the help of an optical printer (a woman and a cat are added later on).

The principles of choreography remain constant throughout the film, but the film quickly becomes “about” the many small visual surprises that emerge from the various overlappings. With each added layer of action, new patterns coalesce and dissolve in ephemeral dances. While this is made most explicit in the live-action segment (alone, the man appears to be squirming at nothing at one moment and punching the air at another; with a double added, the new man is recoiling from the first man’s punch), it also occurs in unexpected moments of the two animation segments. By itself, a wooden block appears to be rotating around its own corner; when another block rotates adjacent to it, the two swirl around a mutual center in a temporary do-si-do. A cutout caricature floating in an arc, alone, seems only going from place to place; with another caricature added, it speeds past a partner in a synchronized dance.

McLaren and Munro make incredibly acute our awareness of these surprise moments, because the rules of the game are so clear at the outset. The number of figures and the allowable trajectory of movement is demonstrated at the beginning, in a clearly-defined field with nothing to distract us (the block segment takes place on a chessboard, effectively making a grid of possible moves for the blocks, and each segment occurs over a black background, totally free of extraneous information): there is nothing up the film’s sleeve. We *know* that these intensified configurations are made up of *nothing but* this small set of rules; and yet each added layer of action, though by definition a repetition of the earlier action, makes it possible to see the action in new ways.

Despite the film’s reliance on a musical structure, its pleasures are less akin to a dynamic temporal whole than to an ingenious series of Gestalt switches. There is no moment for which we’re not already prepared, made with pieces with which we’re already familiar; but moments seem to have let some element slip in the back door in “how did that happen?” amazement.

Moreover, when all the figures are on the screen they never form a neatly-configured whole: we get a different surprise depending on where we look, but the four figures never totally coalesce in mutual symmetry or synchronization. The eye simply cannot keep up with everything. While the elements may be said to strictly “make sense” in that they do not explicitly *contradict* each other (i.e., interrupt each other’s movements), they don’t perfectly *complement* each other either; they simply coexist. This underlying sense of chaos is essential to its wonder, for it keeps alive the feeling that these figures *should* be bumping into each other, that they *shouldn’t* acquire any patterns at all.

The refusal of parts to fit snugly together is also present in McLaren and Munro’s use of multiple animation techniques. The figures execute different choreographies of movement from segment to segment. Paper cutouts do not move like blocks, but in ways which are specific to the materials that construct them. The way the wooden blocks can move seems to be determined by their rigidity of form: since a block has no moving parts, it cannot perform any complex movements. It cannot *slide* from square to square, or *flip*, *jump*, etc., only pivot on one of its corners. McLaren and Munro shoot the field of blocks at a diagonal angle, making clear their three-dimensionality and their weight. The paper cutout caricatures, by contrast, float in a black void, on a “ground” that seems to come into and out of existence based on what the caricature does. Each caricature can slide sideways in a straight line, it can jump, it can turn itself upside-down, and it can fly. The caricatures have separated parts arranged in a hovering vertical stack (a hat, a head, a torso, and two legs), with each part able to move independently. This not only gives the caricature a greater degree of freedom in its movements, it also allows McLaren and Munro to tug at the little man with moderate physical forces like gravity: when a caricature turns

upside down, its legs droop to the side. When a caricature makes a landing, its parts compress slightly and then settle, like a spring.

Canon is clearly not abstract animation; everything is recognizable. But equally clearly, it does not play by the rules of a cartoon. Its dominant principles are sensory. One does not partake in the newfound powers of movement in a wooden block or a paper figure. These things move, but not in a way that beckons us to identify with a freedom from physicality; quite the opposite, since each thing can only move in a single set pattern. What matters is not what a moving figure seems able to do, but what movement *looks like*, and the ways that the same point-to-point change of location can look like a different kind of movement, depending on its surroundings.

Figurative animation is generally not so formalist or demonstrative as this. Nonetheless, it is significant that *Canon* was the film with which ASIFA chose to kick off its first American theatrical program of animation, at the Los Angeles County Museum of Art in 1965.²¹ Figurative animation tends to evoke *different* pleasures and problems than those of cartoons. Its pleasures are often more akin to visual novelty, a delight in sensory calisthenics. Encountering a variety of modes of movement, as spectators did at this event (and at numerous animation festivals and special animation exhibitions at film festivals), gives rise to a dual effect: that the possibilities of animation are limited only by the imagination, *and* that the impression of animated movement will persist through anything. The impression persists so reliably as to be automatic. In fact, it is precisely *because* the impression of movement is automatically assured that anything can be made to move. The paradox of freedom and automaticity, of magic and

²¹ "The Los Angeles County Museum of Art presents its first international animated film exhibition. . ." Exhibition program. Los Angeles County Museum of Art, Dec. 2-5, 1965.

mechanism, created by these two effects—effects which themselves operate as the assumptions that underwrite our very idea of animation—lies at the heart of figurative animation’s aesthetic of animated motion. Its appeal, we might say, is irreducibly reductive.

5. From the plasmatic to animated automatism

Studies of cartoons tend to revolve around the problematic of the plasmatic. Eisenstein himself noted the irony of Disney’s Romantic naturalism emerging from the United States under industrial capitalism.²² More recent studies of cartoons, by Norman Klein, Vivian Sobchack, and others, often expand on this thematic to explore the vexed relations between the pre- or anti-modern freedom promised in cartoon characters and the quintessentially modern technologies or the automatized labor conditions that produce them.²³ Cartoons thrive on Taylorism while rebuking it. Consequently, the major question behind the plasmatic is whether its pleasures represent the possible defeat of capital, the triumph of capital, or some dialectical tension between the two.²⁴

²² See Eisenstein, 3-4.

²³ See Norman Klein, *Seven Minutes: The Life and Death of the American Animated Cartoon* (London: Verso, 1993), 75-80; Vivian Sobchack, “Animation and Automation, or, the Incredible Effortfulness of Being,” *Screen* 50.4 (2009), 375-391; and Scott Bukatman, *The Poetics of Slumberland: Animated Spirits and the Animating Spirit* (Berkeley: University of California Press, 2012).

²⁴ See Donald Crafton, *Before Mickey*, 137-168; see also Krauss, 16; and Keith Broadfoot and Rex Butler, “The Illusion of Illusion,” in Alan Cholodenko, ed., *The Illusion of Life: Essays on Animation* (Sidney: Powers Books, 1991), 272.

My own study of animated motion steers away from these issues—not because I think they are inappropriate questions to ask of figurative animation,²⁵ but because animated motion presents questions of a different kind of automatization than the kind of assembly-line dehumanization typically evoked in discussions of the plasmatic. Animated motion makes acutely and sensuously clear a remarkable fact about human perception: namely, that it in some sense works independently of our control. The potentially infinite domain of animated media is made possible by the guarantee that certain configurations of distance and timing will automatically be seen by us as so many kinds of movement—movement of the same kind as that which we see in everyday life. In this way, every piece of animation is an experiment upon the senses. That every piece of well-timed animation *works*, irrespective of what is moving, proves the repeatability of the phenomenon.

Throughout the dissertation I refer to this problematic as *animated automatism*. The concept of “automatism” was first applied to film by philosopher Stanley Cavell in *The World Viewed*, to account for the many related ways in which film could be said to work “automatically”—in the click of the camera, in the reliance of narrative films on the regularity of techniques and conventions, and in the spontaneous ways in which new possibilities for film may be created.²⁶ Recent scholars like Rodowick and Krauss have found in Cavell’s formulation of

²⁵ Quite the contrary; given that these shorts almost never made money and that they often relied on a combination of craftsmen-like communities, moonlit commercial work, and government funding in order to subsist, the question of a political economy of figurative animation would get very complex very quickly, and would likely benefit from the growing number of studies in transnational film, global film culture, and film festivals. See, e.g., Marijke de Valck, *Film Festivals* (Amsterdam: Amsterdam University Press, 2007) and Nataša Đurovičová and Kathleen Newman, eds., *World Cinemas, Transnational Perspectives* (New York: Routledge, 2010).

²⁶ See Cavell, 23 and 101-107.

automatism a particularly rich way of discussing medium-specificity.²⁷ They find that if an artistic medium is a collection of automatisms, in the sense of a material support interacting with conventions laid upon it in historically variable ways, then film can retain a kind of medium-specificity without falling prey to ahistorical notions of medium-essentialism.

In my own problematic I wish to retain some of the force of this term, particularly in the way it makes significant the fact that automatisms always have to be discovered and made use of. (Nothing is so much as a possibility for analysis of an artistic medium until it is made into a fact about the medium through one or more specific artworks.) The various parameters of animated motion, the particular timings that make an object appear to fall or fly or float, are clearly automatisms in this sense. In the way that one finds what makes a good photographic subject by testing out various subjects before one's lens, one finds out what makes good movement by testing out different possibilities of movement. However, these discoveries of the medium are *at the same time* discoveries of the automatic features of perception. Animated motion is thus an automatism that resembles less the reductions of capitalist production than it resembles the experimental procedures of perceptual psychology. Animated automatism makes the art of animation something like what Merleau-Ponty called painting, yet inverting his original meaning: a "secret science."²⁸

The study of art has had a conflicted relationship to psychology at least since Kant's notion of the beautiful attempted to reconcile the cold objectivity of the outside world with the mere subjectivity of sensation. In the mid-nineteenth century, Gustav Fechner, one of the

²⁷ See Krauss, *A Voyage on the North Sea: Art in the Age of the Post-Medium Condition* (New York: Thames and Hudson, 1999), 5-7; and Rodowick, 41-52 and 124-131.

²⁸ Maurice Merleau-Ponty, "Eye and Mind," in Galen A. Johnson, ed., *The Merleau-Ponty Aesthetics Reader: Philosophy and Painting*, trans. Michael B. Smith (Evanston, IL: Northwestern University Press, 1993), 123.

founding figures of experimental psychology, attempted to find lawlike relations of agreeableness in people's preferences for various proportions of rectangles.²⁹ Throughout the early twentieth century, Gestalt psychologists like Wolfgang Köhler and Kurt Koffka argued for a holistic approach to the science of perception itself, based upon qualitative sensitivities to surface features akin to aesthetics.³⁰ Maurice Merleau-Ponty took that sensitivity to its most extreme conclusion, arguing that the body's relation to the world manifested itself through finding an appropriate creative stylistic approach toward its world, in the manner of an artwork.³¹ (In the process he dismissed objective Gestalt laws as narrow and erroneous.³²) More recently and urgently, film and media studies has encountered new promises and threats from scientific analysis in the forms of cognitive film theory and affect theory.³³ Concurrently, psychologists and neuroscientists are devoting increased attention to the pleasures and perceptions of moving images *as* moving images (and not as schematic analogues for everyday life).³⁴ The strange and tense state of film studies in this regard is perhaps best exemplified by the significance found in

²⁹ See Flip Phillips, J. Farley Norman, and Amanda M. Beers, "Fechner's Aesthetics Revisited," in Joshua A. Solomon, ed., *Fechner's Legacy in Psychology: 150 Years of Elementary Psychophysics* (Boston: Brill, 2011), 183-186.

³⁰ See Rudolph Arnheim, "Gestalt and Art," *Journal of Aesthetics and Art Criticism* 2.8 (Autumn 1943), 71-75.

³¹ See Merleau-Ponty, *Phenomenology of Perception*, trans. Colin Smith (London and New York: Routledge and Kegan Paul, 1970), 148-153.

³² See Merleau-Ponty, 47-50, 60-61, and 115-124.

³³ For some examples of cognitive film theory, see David Bordwell, *Narration in the Fiction Film* (Madison: University of Wisconsin Press, 1985); Ed S. Tan, *Emotion and the Structure of Narrative Film: Film as an Emotion Machine*, trans. Barbara Fastig (Hillsdale, NJ: Lawrence Erlbaum Associates, 1995); and Torben Grodal, *Embodied Visions: Evolution, Emotion, Culture, and Film* (New York: Oxford University Press, 2009). For examples of affect theory see Brian Massumi, *Parables for the Virtual* (Durham: Duke University Press, 2002), and Patricia Ticineto Clough and Jean Halley, eds., *The Affective Turn: Theorizing the Social* (Durham: Duke University Press, 2007).

³⁴ For an example particularly relevant to animation, see Raymond A. Mar, William M. Kelley, Todd F. Heatherton, and C. Neil Macrae, "Detecting Agency from the Biological Motion of Veridical vs. Animated Agents," *Social Cognition and Affective Neuroscience* 3.2 (2007), 199-205.

psychologist Albert Michotte's notion of the impression of reality in cinema. Depending on the scholar, Michotte's study can be used as either the basis of an experimentally-verifiable picture of film-viewing *or* the basis of a humanist phenomenological aesthetics of cinematic realism.³⁵

Animation is a particularly ripe place to test these relations, and I write with an acute awareness of the heated debates around such recent approaches.³⁶ In making explicit the associations of animation with experimental psychology, I do not argue for the value of a particular approach to the perception of animation. This is not a work of cognitive film theory or affect theory; I make no claims as to the objective correctness of the experimental literature I cite on the perception of movement. Likewise, this project does not place animation practice under a general rubric of the normalization protocols of the modern human sciences; I am concerned with particular powers of science, art, and criticism, but I remain agnostic as to whether all these matters can fit into a coherent narrative of *power*.

Rather, I argue for animated motion as a site which makes the tension between the immediacy of aesthetic experience or creation and the impersonal elegance of mechanism irreducible, and yet inextricable—an almost unbearable liminal space wherein the drama of reduction plays ceaselessly against assertions of openness and freedom. By this, I mean that animated motion partakes of what we might call, following philosopher of science Kenneth Schaffner, a *partial reduction*: a surface-level phenomenon which is not wholly reducible to lower-level mechanisms, but which requires some recourse to the lower level to be accounted

³⁵ For the former, see Tan, 68-69; for the latter, see Gunning, 40-44. Both of these avenues come by way of Christian Metz's essay, "On the Impression of Reality in the Cinema;" see Metz, *Film Language: A Semiotics of the Cinema*, trans. Michael Taylor (New York: Oxford University Press, 1974), 3-15.

³⁶ See, e.g., David Bordwell, *Figures Traced in Light: On Cinematic Staging* (Berkeley: University of California Press, 2005), 258-265; D.N. Rodowick, "An Elegy for Theory," *October* 122 (Fall 2007), 91-109; and Ruth Leys, "The Turn to Affect: A Critique," *Critical Inquiry* 37 (Spring 2011), 434-472.

for.³⁷ The impression of movement is undeniably an illusion, but it is also undeniably something more. Either side may be emphasized as desired, but neither entirely goes away. If, as Adorno claims, the specific nature of artistic freedom is always bound by its historically-specific circumstances,³⁸ then the peculiar fate of figurative animation is to set its freedoms against the possible destruction of its own history. (The mechanics of an optical illusion are a matter of biology, only “historically specific” on a geologic time scale). In order to assert its irreducible freedom as art and offer its dazzling sights, animation must give something of itself to the science whose progress always threatens to make its very claims to freedom illusory.

6. Approach and summary

Inevitably, this dissertation itself presents a somewhat reductive view of an extraordinarily variegated field of filmmaking, and some qualifications about the values, limitations, and strategic purposes of my approach are in order. First, this is not a general history or blow-by-blow account of the nonstudio animated short. Rather, I identify some of the major institutional mechanisms and some of the exemplary figures who were responsible for the widespread assumptions behind our contemporary idea of animation. This entails a focus on the early activities of ASIFA (in, e.g., its internal newsletters), rule changes at AMPAS, and various journalistic and critical accounts of animated shorts in film culture journals (*Sight and Sound*,

³⁷ See Kenneth Schaffner, “Etiological Models in Psychiatry: Reductive and Nonreductive Approaches,” in Ken Kendler and Josef Parnas, eds., *Philosophical Issues in Psychiatry: Explanation, Phenomenology, and Nosology* (Baltimore: Johns Hopkins University Press, 2008), 48-98.

³⁸ See T.W. Adorno, in in Gretel Adorno and Rolf Tiedemann, eds., *Aesthetic Theory*, trans. C. Lenhardt (London and New York: Routledge and Kegan Paul, 1984), 7-8.

Film Culture, *Film Library Quarterly*, and especially the cartoon-and-comics publication *Funnyworld*). A broader history would undoubtedly include the roles of various 16mm distributors, film festival circuits, film societies, government funding, and various individual studios (United Productions of America, the Zagreb studio in Yugoslavia, the National Film Board of Canada, the Halas and Batchelor studio in Great Britain, and several others).

Second, my selection of films and filmmakers, for the purposes of this analysis, is narrow, as is my method of analyzing the films. Although dozens of films will be noted or described, some in more detail than others, I reserve my most serious inquiry for two representative parties: Norman McLaren, and John and Faith Hubley. These filmmakers are selected for their importance in the community of figurative animation, for the depth and variety of their respective bodies of work, and for the availability of their theoretical writings (which necessarily complement the films). McLaren and the Hubleys, in different ways, embodied a certain intrepid and innovative spirit of noncartoon animation. I have also found it necessary to focus, in the films which I closely analyze, almost exclusively on matters of visual style, for two reasons. First, and most obviously, animated motion is itself irreducibly a matter of visual style, trading on the tension between a figure's form or design and its ability to move. Second, the ways in which these films utilize animated motion are highly elusive and complex, demanding close description in a manner often better suited to an art critic than to a typical film scholar.³⁹ Animated shorts often confound the vocabulary developed in film studies to analyze live-action, feature-length stories; disentangling narrative significations or counting shots rarely captures the

³⁹ I do not think it is coincidental that one of the few American critics to celebrate cartoons and one of the most acute writers on cartoons was Manny Farber, a painter who filled his reviews with references to visual art and wrote in thick imagery that often made a film sound more like a plastic art than a form of storytelling. See, for example, "Short and Happy," in Robert Polito, ed., *Farber on Film: The Complete Film Writings of Manny Farber* (Library of America, 2009), 103-106.

strange sensuous dramas inherent in these films. In the explosion of animation studies, much of which takes its analytical cues from film and cultural studies, there is a curious shortage of close descriptions of *the way things move*. A focus on animated motion, I would argue, does not limit one's interrogative scope to a dry formalist analysis. On the contrary, it demands a delicate eye and a concerted effort to put into words sights whose striking qualities often seem to elude description.

Third, I discuss, in considerable detail, key thinkers in the history of the problematic of animated motion. Drawing up my theoretical boundaries along this problematic necessarily involves expanding the purview of "animation theory" to include many figures that have not gotten due consideration as animation theorists; some of these thinkers even have an acrimonious relation to animation, or no obvious relation at all. My discussions of these thinkers, moreover, tend toward the conflicted and the contextualized. I avoid, almost entirely, straightforward applications of their theories to animation. Much of the theoretical literature on animation has proceeded by extracting a concept or distinction from a given thinker and arguing for its usefulness by applying it to an instance or type of animation. Suzanne Buchan's concept of the "portmanteau" puppet, applying literary word-assemblages in James Joyce to the junk-heap characters often found in the Quay Brothers' films, is an instance of this;⁴⁰ Thomas Lamarre's invocation of Felix Guattari's concept of "machine" (as distinct from a "mechanism") to describe animation as an arrangement of cultural and physical potentialities, is another,⁴¹ as is my own co-opting of "automatism." Gestures of this kind are necessary for theory-building, but they are not the only means of theoretical inquiry.

⁴⁰ See Buchan, 128-132.

⁴¹ See Lamarre, xxx-xxxiv.

My concern with the dominance of the theory-as-application approach in animation studies is that it lies in danger of perpetuating an overall impression that such theoretical inquiry has no history, except as a pile of spare parts to be put together at will. A lack of concern for the history *around* a concept or a claim risks misunderstanding a potentially resourceful theory—as when scholars take Stanley Cavell’s statement that “cartoons are not movies” to be a blanket dismissal of animation, or when scholars take Vachel Lindsay’s film theory to be baldly incoherent. My own stable of animation theorists is not built upon a basis of how applicable this or that theoretical concept is to the study of animation. Rather, my approach constructs a series of intellectual narratives of *how animated motion becomes a problem for the theorist within his own field of concerns*. I consequently expend a great deal of labor at the service of “what someone seems to mean by saying *x*,” rather than “what it’s possible for *x* to mean.” This kind of approach, in which a theory intermingles with its own history, has been put to powerful use by Miriam Hansen and Caroline A. Jones;⁴² Esther Leslie’s *Hollywood Flatlands* more or less follows this model, and Deleuze’s early “portraits” of philosophers like Kant and Spinoza also follow a model somewhat close to this.⁴³ The approach is not without its own risks. If a given problem becomes an merely occasion to explore a theorist’s deeper contradictions, the approach begins to read like an intellectual biography, potentially losing the original urgency of the original problem in a sea of exegesis. Such writing can also come across as a form of boundary-

⁴² See Miriam Hansen, *Cinema and Experience: Siegfried Kracauer, Walter Benjamin, and Theodor W. Adorno* (Berkeley: University of California Press, 2012) and Caroline A. Jones, *Eyesight Alone: Clement Greenberg’s Modernism and the Bureaucratization of the Senses* (Chicago: University of Chicago Press, 2005).

⁴³ See Gilles Deleuze, *Kant’s Critical Philosophy: The Doctrine of the Faculties*, trans. Hugh Tomlinson and Barbara Hammerjam (Minneapolis: University of Minnesota Press, 1984), and *Spinoza: Practical Philosophy*, trans. Robert Hurley (San Francisco: City Lights Books 1988). I take the term “portraits” from the way that Deleuze himself referred to these early studies (which also included Bergson, Nietzsche, and Hume). See François Dosse, *Gilles Deleuze and Félix Guattari: Intersecting Lives*, trans. Deborah Glassman (New York: Columbia University Press, 2010), 108-128.

policing, a fight over some single final interpretation of a theorist. If accepted as *the* dominant or correct way of doing theory, this approach yields a stagnant field.⁴⁴ The reward, however, is a nuance sometimes lacking in theory-as-application. Plunging into the fine grain of a theorist's own struggles with a concept or a problem can produce fruitful object lessons for our own ways of thinking. By catching thought processes in their thick complexity, we take on a highly mobile, ground-level mode of theorizing, akin to examining possible moves from moment to moment in a game (rather than affixing a label to an object). Theorists often play games with their own characteristic moves—sometimes even with their own sets of rules. Focusing on the moves and the rules (and not just on concepts or terms) can yield not only valuable concepts for animation, but valuable *ways* of conceptualizing the field.

Finally: the historical, descriptive, and theoretical components of this project are not neatly divided. Since the nature of animated motion as a problematic is all of these things at once, the separate methodological strands are tightly woven together. Each chapter is organized as an arena of conflict in which animated motion is posed as a problem for one or two historical figures, in a delimited historical period. The way that each figure approaches animated motion (or attempts to avoid it) reveals something of the problematic. I cover seven figures in total: philosopher Stanley Cavell, animator Norman McLaren, experimental psychologist Albert Michotte, turn-of-the-century cultural critic Rollin Lynde Hartt, primitivist poet Vachel Lindsay, animator John Hubley,⁴⁵ and *Funnyworld* editor and critic Michael Barrier. Of these figures,

⁴⁴ Raymond Williams is particularly insightful on the dangers here, recounting the development of orthodox Marxism in twentieth century academia. See Williams, *Marxism and Literature* (Oxford: Oxford University Press, 1977), 1-7.

⁴⁵ I say my focus is on John Hubley in particular and not the unit of John and Faith Hubley because of the importance of John's theoretical work in figurative animation and his professional biography, as a studio cartoonist who converted to figurative animation. This is done only to focus as clearly as possible on the problematic, not to

only Cavell and McLaren are widely known and studied in film; and, as I will argue, the place of even these two figures is commonly misunderstood. Albert Michotte was an active member of the Filmology movement in 1940s and 1950s France, but currently is only considered relevant in film for his heavy influence on one of the early important essays in film theory, Christian Metz's "On the Impression of Reality in the Cinema."⁴⁶ Rollin Lynde Hartt's 1909 book-length study of mass culture (one of the first of its kind), *The People at Play*—which contains a chapter on cinema—has been occasionally cited by historians of early film, but primarily at the service of contextualizing broader assumptions around cinema's origins.⁴⁷ Vachel Lindsay is nominally acknowledged as publishing the first true book of film theory in English, *The Art of the Moving Picture* (1915), but his work has been quietly dismissed as useless or unrecognizable to the issues around the canon of film-theoretical work.⁴⁸ John Hubley is one of the better-known filmmakers in animation studies, but primarily through his place at UPA; a hero of graphic-style

try to erase the role that Faith played in their success. After John's death in 1977, Faith continued making animated shorts alone until her own death in 2001. Those shorts have a their own complex relation to the earlier collaborative work, but a detailed discussion of that dynamic lies outside the scope of this dissertation.

⁴⁶ See also Edward Lowry, *The Filmology Movement and Film Study in France* (Ann Arbor: UMI Research Press, 1985), 164-165.

⁴⁷ See Jan Olsson, *Los Angeles before Hollywood: Journalism and American Film Culture, 1905 to 1915* (Stockholm: National Library of Sweden, 2008), 53-55; and Richard Abel, *The Red Rooster Scare: Making Cinema American, 1900-1910* (Berkeley: University of California Press, 1999), 204N83.

⁴⁸ One can see this disavowal in action in a casual aside by Dana Polan: "[V]irtually any official historical account [of film studies] by today's practitioners will predictably cite as a disciplinary antecedent the poetic and often wacky ramblings of the folk poet Vachel Lindsay..." At one stroke, Lindsay is historically acknowledged and theoretically evacuated. See Polan, *Scenes of Instruction: The Beginnings of the U.S. Study of Film* (Berkeley: University of California Press 2007), 19. See also Allan Langdale, "Editor's Introduction," in Langdale, ed., *Hugo Munsterberg on Film: The Photoplay: A Psychological Study and Other Writings* (New York: Routledge, 2002), 35N48.

For an in-depth study of Lindsay see Myron Lounsbury's commentary in Vachel Lindsay, ed. by Lounsbury, *Progress and Poetry of the Movies: A Second Book of Film Criticism* (Lanham, MD: Scarecrow Press, 1995). Lawrence Goldstein analyzes Lindsay's movie-star poems but does not cover the concerns of his film theory; see Goldstein, *The American Poet at the Movies: A Critical History* (Ann Arbor: University of Michigan Press, 1994), 19-38.

cartoons, his later independent work remains under-examined.⁴⁹ Michael Barrier's history of American studio animation, *Hollywood Cartoons* (2003) is recognized as one of the major texts of animation history, yet his criticism and editorial work at *Funnyworld* in the 1970s strongly informed his approach to the book; that earlier work has been occasionally cited but not studied as a whole in any detail. This dissertation, then, in closely examining the aforementioned figures, also functions as a *de facto* recovery project, a demonstration of the relevance of these figures for current issues of animation and for film more generally. In part, my interpretations of each figure are as detailed as they are in the hope of instigating new dialogues and possibilities around them. I have barely managed to scratch their surfaces.

Chapter one, "Automatic Arts: Stanley Cavell beyond Cartoons," argues for what we might call the medium-specificity of animated motion, as tied to a particular kind of automatism that is distinct from both live-action film and cartoons. This is done through a close reading of Stanley Cavell's infamous claim that "cartoons are not movies."⁵⁰ Cavell's claim, I argue, needs to be contextualized against two overlapping backgrounds: the academicization of film theory (and its attendant shift from classical models to contemporary models), and the rising relevance of "animation" over and against the form of "cartoons." What appears to be a dismissal, when examined more fully, is actually an acute distinction between the unique powers of two ontologically different forms of film, cartoons and movies. This distinction was employed not only by realist film theory but by plasmatic theorists of cartoons like Seldes and Eisenstein. Cavell's film theory is able to readily incorporate *both* live-action film *and* cartoons as ways of acknowledging a world. However, he is unable to account for problems of figurative animation;

⁴⁹ See e.g., Leslie, 239-295 and Klein, 229-242.

⁵⁰ Cavell, 168.

figurative animation's automatism, acknowledging perceptual processes instead of real-time events or fantastical characters, puts the very aspiration to cohesion characteristic of a "world" into question.

Chapter two, "Automatism as Testing: From Albert Michotte to Norman McLaren," examines an uncanny similarity between Albert Michotte's 1940s experiments in causality and Norman McLaren's 1976 instructional film series for animators, *Animated Motion*. This similarity, I argue, belies a coincidence of what Ian Hacking calls "styles of reasoning"⁵¹ between McLaren's brand of experimental animation and Michotte's brand of experimental psychology, inherited from the Gestalt school. Because both of these traditions were interested in identifying regularities and changes in perceptual forms, they based their practice in similar kinds of visual tests. McLaren's exemplary place in the canon of figurative animation reveals a deeper reliance of the artform on a scientifically-oriented mechanics of illusion which separates the movement from the moved.

Chapter three, "Master Ingenuity: Rollin Lynde Hartt and Vachel Lindsay on the Novelty of Illusion," argues that animated motion offers a novelty, a perceptual anomaly, which we hand over to a scientific authority when we note its status as an illusion. The stakes of this authority are examined through a close analysis of an early moment of film theory, in the writings of Rollin Lynde Hartt and Vachel Lindsay. The trickfilm, predecessor to the cartoon, provided fertile occasion for both writers to struggle with a much larger question of how to *account for*, even how to properly *see*, an illusion. Hartt sees a potential for trickfilms to participate in a project of sensory education, emphasizing how a trick is made; Lindsay sees in the tricks'

⁵¹ See Ian Hacking, "Styles of Scientific Reasoning," in John Rajchman and Cornell West, eds., *Post-Analytic Philosophy* (New York: Columbia University Press, 1985), 145-165, and "'Style' for Historians and Philosophers," collected in *Historical Ontology* (Cambridge: Harvard University Press, 2002), 178-199.

paradoxical immediacy the potential for religious visions on film that will lead America toward a more reverent, less scientifically-minded, future. Although neither of these writers is overtly talking about the problematic of animated motion, they reveal that the very act of categorizing a perceptual anomaly is tied to one's place in a cultural milieu. By examining a period of proto-animation theory *before* cartoons, this chapter reveals a fuller scope of our commitments when we admit that animation is based on an illusion. To deny, as Lindsay does, that the impression is an illusion, is to inhabit a different kind of world.

Chapter four, "Convincing Movement: Barrier and Hubley on the Varieties of Animated Motion," argues that figurative animation's commitment to novelty prompts something like a modernist crisis in the medium, in contrast to the popular or traditional pleasures of the cartoon. Michael Barrier, through his journal *Funnyworld*, vigorously denounced the new 1970s animation for its apparent lack of standards and lack of concern for an audience; John Hubley, one of the central proponents of figurative animation, exemplified in his filmmaking and in his writing an altogether new standard *for* animation, expanding its generic content and its technical scope toward ever more startling sights. Their disagreements, both implicit and explicit, reveal a profound anxiety, latent in animation's promise for perpetual renewal of its form, toward the problem of its potential disposability.

Toward a more self-aware address of the animation problem, I have also found it necessary to include two excursions into episodes of film theory that narrowly avoided addressing animation as a question, a thread of near-misses for the sustained possibility of animation theory. The first excursus, included after chapter two, concerns the Gestalt-inspired speculations of Albert Michotte on the cinematographic "impression of reality" for the Filmology movement in 1948. The second excursus, which follows chapter four, concerns the brand of criticism forged

from high modernism and phenomenology in the writings of Annette Michelson and others at *Artforum* from the late 1960s to the early 1970s. These episodes correspond the historical periods covered by the chapters with which they are paired. Both of the theoretical projects I analyze make perception or illusion an explicit theme of analysis; yet neither of them successfully incorporates animation as a matter to be investigated. I lay out, in each excursus, some reasons why this turned out to be the case.

These excurses are included to add complexity to the Whiggish narrative of film studies' historical neglect toward animation that is currently en vogue. This narrative almost always boils down to one or two reasons why decades of film study or criticism brushed over such a significant area: usually the trivialization of cartoons as children's entertainment, or an excessive focus on the photographic powers of the camera. The narrative tends not only to simplify the past but overvalue the present. It gives a subtle but powerful impression that the neglect can be easily addressed simply by incorporating animation as one more object of study, or by embracing an ontology of digital manipulability which already includes animation. My purpose in the excurses is to make clear that the matter is not so clear-cut as this. Just as the idea of animation is not a timeless entity but a historically-variable set of assumptions whose contours and stakes change over time, so the *neglect* of animation has a history of its own. Michotte and Michelson turn out to overlook animation for a variety of subtle and complicated reasons. A closer look at this history can force a more reflective stance on why animation seems such an obvious problem now, and how its avoidance can be better avoided.

7. Motion as toy, motion as nature

The dense network of aesthetic play, scientific illusion, and historical novelty in animated motion was provocatively alluded to by literary theorist Viktor Shklovsky in 1923. The title of this dissertation is drawn from Shklovsky's stray remark that the uniqueness of animation's appeal lay in "the awareness of the toy-like nature of the moving character."⁵² By this he meant that, in contrast to live-action cinema—which, in merely reproducing recorded movement tried to hide the very detachment from reality that made the cinematic instrument special—the "toy-like nature" of the way animated cartoons moved belied its form and could become a source of wonder in its own right. No thing in nature moved like an animated figure moved. And yet, in its detachment, it revealed something of the nature by which we *see* movement. The toy of optical illusion, if not natural, was nonetheless *like* nature: a piece of nature in peculiarly self-aware form.⁵³ The vertiginous uncertainty of that dialectic—that animated movement is undeniably toy-like, and yet a toy undeniably like nature—mimics a deeper uncertainty. In Shklovsky's own formalist orientation, "art exists that one may recover the sensation of life...to

⁵² Viktor Shklovsky, *Literature and Cinematography*, trans. Irina Masinovsky (Champaign and London: Dalkey Archive Press, 2008), 69. Shklovsky saw in animation an antidote to the increasingly habituated way in which live-action cinematography had come to be viewed: "Thus one of the options for an artistic structure, the game of illusion, is vanishing. Maybe cartoons can be combined with regular films? In any case, what is meant to happen will happen." (70)

⁵³ By this formulation I also mean to invoke Jonathan Crary's narrative of optical toys in the nineteenth century as participating in a broad abstracting of vision, illustrating various perceptual principles. See Crary, *Techniques of the Observer* (Cambridge: MIT Press, 1990), 97-136. While I do not go as far as Crary in attributing to such toys the ability to disperse control over their observers, much of the work here takes its inspiration from Crary, and the story I tell can be seen in many ways as a continuation of the issues with which he deals.

make one feel things, to make the stone *stony*,”⁵⁴ but only at the price of estranging us from the stone’s natural conditions.

It is a subtle irony of film history that Shklovsky saw in animation the cinema’s best hope for a future.⁵⁵ After nearly a century his statement of hope now seems prophetic, and animation’s current importance for the cinema is so commonly-noted as to be commonplace, undermining the very power of estrangement in which Shklovsky had found hope. The following pages are an effort to make strange that strangeness which Shklovsky saw, to dwell in its unhabituated discomforts.

⁵⁴ Viktor Shklovsky, “Art as Device,” in Lee T. Lemon and Marion J. Reis, trans. and eds., *Russian Formalist Criticism: Four Essays* (Lincoln: University of Nebraska Press, 1965), 12, original emphasis. Shklovsky goes on to say that, in art’s effort to bring the experience of the object to the forefront, the object itself becomes unimportant.

⁵⁵ “There is yet one other line along which cinematography may evolve. It is the animated film. After seeing them several times, I am convinced that they have possibilities that are, as yet, untapped.” See *Literature and Cinematography*, 69.

Chapter One

Automatic Arts: Stanley Cavell beyond Cartoons

1. Introduction

This chapter revisits a rather notorious claim about animation in the history of film theory. Shortly after the publication of *The World Viewed*, American philosopher Stanley Cavell's "reflections on the ontology of film" in which he defined movies as "a series of automatic world projections,"¹ Cavell was charged with having an excessively narrow idea of what film was; as most forcefully pointed out by Alexander Sesonske, this ontology, among other problems, appears to leave cartoons out of cinema entirely.² Cavell responded to the charge by baldly stating that, indeed, "cartoons are not movies."³ He followed the statement with some critical remarks on cartoons as to why they should not be thought of as movies, emphasizing the elastic buoyancy of cartoon bodies and environments.

These remarks can easily be (and often are) interpreted in the following way: The flippancy of Cavell's statement is merely the overt and logical conclusion of realist film theory's fetishization of the powers of the photographic camera and its privileged relation to the world; Cavell's assumptions, derived from the realists, all but force him to dismiss animation altogether.

¹ Stanley Cavell, "More of *The World Viewed*," in *The World Viewed: Enlarged Edition* (Cambridge: Harvard University Press, 1979, hereafter abbreviated WV), 72.

² Alexander Sesonske, "The World Viewed," *The Georgia Review* 28.4 (1974), 563-564.

³ WV 168.

Furthermore, the excessive focus on the camera is symptomatic of film criticism and theory more generally, leading to the perennial marginalization of animation (until the digital age).⁴

Such an interpretation, in the short run, has proven incredibly useful as a call-to-arms for the importance of animated film.⁵ However, it runs the risk of painting with a very broad brush. A polemic view of Cavell's comments, in the way I've sketched it here, neglects several complications: the obscurities of Cavell's own ideas of film as it relates to the world, the intricacies of the realist tradition from which Cavell draws, the ambivalences of film scholarship as it was entering the academy and attempting to shed its prescriptive classical roots, and the major changes occurring of the world of animation itself. This chapter will trace out the ways that these various factors weave into Cavell's remarks on cartoons, arriving at a markedly different interpretation. I argue that, contrary to all appearances, Cavell is ultimately a rather orthodox theorist of cartoons. His idea of cartoons as what he calls "animated world projections" fits comfortably within what is widely considered the dominant theory of American cartoons: a tradition of plasmaticness, complementary to the realist emphasis on the camera, overtly celebrating the illogical violations of reality that made cartoons distinctive.

⁴ Rosalind Krauss, for example, takes Cavell's remarks to be a "condemnation of the weightlessness of cartoons." See Krauss, "'The Rock': Kentridge's Drawings for Projection," *October* 92 (Spring 2000), 16. Suzanne Buchan more subtly claims that Cavell dismisses cartoons as a "region" of film which seems to remain apart from the more proper "world" of cinema: "Cavell fails to point out...that the cinematic apparatus enables movement and the experience of these drawings as a 'reality' particular to the 'region' of animation." See Buchan, "The Animated Spectator: Watching the Quay Brothers' 'Worlds,'" in Suzanne Buchan, ed., *Animated "Worlds"* (Eastleigh, UK: John Libbey Publishing, 2006), 18. I take Buchan to mean by this that Cavell does not allow for the possibility of cinema technology to create more than one world.

Tom Gunning argues that the neglect of animation from film theory is largely due to the influence of "photographic theories of film." See Gunning, "Moving Away from the Index: Cinema and the Impression of Reality," *differences* 18.1 (2007), 34.

⁵ Indeed, I have not located *any* scholarly references to Cavell's remarks on cartoons antedating the growth of animation studies.

Paradoxically, it is Cavell's orthodoxy that causes problems for his theory. His ideas about cartoons are congruent with the so-called "Golden Age" of American studio animation—specifically, with the explosive popularity of Disney in the 1930s. By the time of Cavell's writing, in the 1970s, the form of the cartoon that Cavell invokes is all but dead. Coincident with the slow disappearance of the cartoon divisions from American studios was a rise in prestige and visibility of *animation*, a deliberately multivalent art which reacted strongly against the strictures of Disney and towards incorporations of multiple techniques for creating movement. Unlike cartoons, animations did not share a world. Cavell's entire theory of film, predicated upon a shared acknowledgment of the world, is left unable to account for so much as the possibility of animation as an artform.

It is important that Cavell is able to account for *cartoons* and not for *animation*. The gap between the two underscores the problematic of what I call, adapting some of Cavell's own language, *animated automatism*. Automatism is a concept which holds a special place in Cavell's theory of film. He uses the term to refer at once to the camera's ability to automatically record whatever is in front of it, to shared artistic conventions or techniques, and to the modernist creation of new individualist styles. *Animated* automatism refers to animation's ability to always create new techniques of movement, based on the automatic conditions of perception that will guarantee the appearance of motion. Animated automatism underwrites the animator's ability to use drawings, paper cutouts, household objects, and anything else he or she can think of, in the service of a new style of animation. By gaming the perception of movement, animated automatism does not assure our relation to the world (as Cavell would insist that an artform must do) but veils it, making the mechanics of science a necessary mediating term between ourselves and our senses.

2. *The World Viewed* at the ends of realism and cartoons

In 1971, the Academy of Motion Picture Arts and Sciences (AMPAS) issued a change of terminology in the rules of their awards to animators. Since 1932, a category had existed for “Best Cartoon.” In 1971 the category became “Best Short Subject, Animated Film.”⁶ This change indicates an obvious broadening of the category. The latter term typically refers to any kind of motion onscreen that is created frame-by-frame.⁷ “Animation” may be found anywhere and may consist of anything, as long as it is not live-action.

The term “animated cartoon” came into common parlance around the late 1910s to early 1920s (soon shortened to the term “cartoon”),⁸ connoting cel-animated short subjects found on a

⁶ The change of terminology is clear from the 1970 Academy Rules to the 1971 Rules. Compare section 18, both editions. Rule 4 in the 1970 edition states:

Short subjects may be submitted in two classifications: a) *Cartoons*, of 3000 feet or less, utilizing animation or other cartoon techniques as the basic medium of entertainment. b) Live action subjects of 3000 feet or less, utilizing live action techniques as the basic medium of entertainment. (*Rules for the Conduct of the Balloting, 43rd Annual Academy Awards, for Achievements during 1970* (Los Angeles: Academy of Motion Picture Arts and Sciences, 1970), 17-18, emphasis added.)

Rule 3 in the 1971 edition states:

An award shall be given for the best achievement in each of two classifications: a) *Animated films* of no more than 3000 35mm feet, or the equivalents in 70mm or 16mm, utilizing animation as the basic medium of entertainment. b) Live action films of no more than 3000 feet, or the equivalents in 70mm or 16mm, utilizing live action techniques as the basic medium of entertainment.” *Rules for the Conduct of the Balloting, 43rd Annual Academy Awards, for Achievements during 1971* (Los Angeles: Academy of Motion Picture Arts and Sciences, 1971), 17-18, emphasis added.)

⁷ See, e.g., Charles Solomon, “Animation: Notes on a Definition,” in Solomon, ed., *The Art of the Animated Image* (Los Angeles: American Film Institute, 1987), 9-10. This is the intuitive definition upon which Lev Manovich relies when he claims that, “born from animation, cinema pushed animation to its periphery, only in the end to become one particular instance of animation.” See Manovich, *The Language of New Media* (Cambridge: MIT Press, 2001), 302, original emphasis.

⁸ See Donald Crafton, “The Veiled Genealogies of Animation and Cinema,” *animation: an interdisciplinary journal* 6.2 (July 2011), 105.

film program, with techniques and generic rules that separated them from feature films. Cartoons tended to feature anthropomorphic animals, metamorphic gags that highlighted their selective obedience to physical laws, and, often, fairy-tale subjects.⁹ Cartoons had existed since the beginning of the studio era (with stop-motion drawings existing even before then), but the award category came into being with the meteoric success of Disney's innovations in sound and color. Nearly forty years later, counterexamples to this model were impossible to ignore for recognition. The award name-change came in the wake of honors to experiments from American independents like John and Faith Hubley and from small studios in Europe. Books celebrating the expansive powers of animation beyond American studio cartoons like Ralph Stephenson's *Animation in the Cinema* (1967) and Roger Manvell and John Halas's *The Technique of Film Animation* (1958, revised 1968), *Design in Motion* (1962), and *Art in Movement* (1970)—all of which deliberately downplayed Hollywood studios in favor of other techniques and national traditions—offered significant aesthetic challenges to the long-held picture of Disney's unquestioned popular and artistic dominance over the animation world.

This opening-up of borders and techniques can be seen as part and parcel with the growing popularity of European art cinema in the United States, arising as it did out of the same film festival culture.¹⁰ (In a New York City theater in 1969, for instance, a Hubley short was

⁹ See Kristin Thompson, "Implications of the Cel Animation Technique," in Teresa De Laurentis and Stephen Heath, eds., *The Cinematic Apparatus* (New York: St. Martin's Press, 1980), 110-111.

¹⁰ Animated shorts were a mainstay at major film festivals like Cannes. In 1956, John Halas organized the first example I have been able to locate of an international festival devoted exclusively to animation in Great Britain, deliberately promoting multiple countries and styles. See Halas, "Animation Artists," *Sight and Sound* 26.2 (1956), 131. Beginning in 1959, Annecy, France, began to hold the first regularly-occurring (bi-annual) international film festival devoted exclusively to animation.

given billing with Jean-Luc Godard's *Weekend* (1967).¹¹) But at least as decisive was the fact that, by 1971, there were hardly any American cartoons left to celebrate. Under the vertical monopolies of the classical studio system, studios had sought to differentiate themselves partly through their own cartoon studios, with their own distinctive characters. Disney was distributed through Columbia, then RKO; MGM had William Hanna and Joseph Barbera's Tom and Jerry shorts; Warner Brothers had their stable of characters and animators at Termite Terrace; and so on. But throughout the 1950s, the major American studios cut costs by trimming their animation divisions (even Disney stopped making shorts on a regular basis in 1955). The 1960s saw those animation divisions close altogether, one by one. By 1971, Universal was the only studio left with in-house animation for theatrical shorts.¹²

That same year, philosopher Stanley Cavell published *The World Viewed*. His first book, *Must We Mean What We Say?* (1969), had interrogated overlapping issues of ordinary language philosophy, epistemology, ethics, modernism, and the arts. *The World Viewed* continued many of these concerns in a much more focused and idiosyncratic way. Cavell's basic goal in the book is to make the case that the movies are worth studying as serious art—more specifically, as having a privileged place in the arts of the twentieth century for being simultaneously a *legitimate* art and a *popular* art. That movies are a legitimate art Cavell takes as obvious, and thus needing, as with any art, a description of the ways in which it manages to be artistic (that is,

¹¹ See "Weekend," advertisement, *Village Voice* 14.12 (2 January, 1969), 39.

¹² See Douglas Gomery, *The Hollywood Studio System* (London: Macmillan, 1986), 47-49, 72-74, 98, 121-122, 159-160, and 170-171. Universal's animation studio would close the next year.

On Disney curbing their production of shorts see Leonard Maltin, *Of Mice and Magic: A History of American Cartoons*, revised and updated edition (New York: Plume Publishing, 1980), 72. Disney would continue making shorts, but only on an erratic basis and of varying lengths. Maltin is careful to distinguish the newer shorts from the character cartoons and Silly Symphonies for which the studio had become famous: "The studio continued to produce extra-length short subjects on an unpredictable schedule through the early 1960s... But for all intents and purposes the Disney short, as audiences had known it for thirty years was dead."

a description of its properties as a medium). That the movies are a popular art he takes to be an important historical fact that distinguishes it from the older arts. By the twentieth century, according to Cavell, the development of the traditionally recognized arts had entered a period of modernism, characterized by “intrinsic difficulty”¹³ for an audience:

Music, painting, sculpture, poetry—as they are now sought by artists of major ambition, artists devoted to the making of objects as the live history of their art—are not *generally* important, except pretty much for the men and women devoted to creating them. For them, the arts are of *such* importance, and that importance raises such questions, that no one free of the questions is free to share their arts with them. These artists have virtually no audiences any longer, except in isolated or intermittent cases.¹⁴

Modernism, for Cavell, severs the *significant* achievements in an art from the *popular* ones. By contrast: “The movie seems naturally to exist in a state in which its highest and its most ordinary instances attract the same audience (anyway until recently).”¹⁵ (The “anyway until recently” qualification points to Cavell’s sense that contemporary film had since lost its original power through coming to question its natural connection to reality, leaving it in its own crisis of modernism.)

The World Viewed is more notoriously known for Cavell’s justification of the first point than for his exploration of the second. To explain the medium-specificity of movies, Cavell appeals to a realist theory of the photographic apparatus, asserting that “the basis of the medium of movies is photographic, and that a photograph is *of* reality or nature.”¹⁶ Cavell believes that to describe the peculiarity of photographs it is necessary to find the significance of the fact that they

¹³ This felicitous phrase comes from Michael Fried, *Three American Painters: Kenneth Noland, Frank Stella, Jules Olitski* (Cambridge: Fogg Art Museum, 1965), 2.

¹⁴ WV, 4, original emphasis.

¹⁵ WV, 5.

¹⁶ WV 16, original emphasis.

are, first of all, not paintings; they present us not with “likenesses” (like paintings), but, “we want to say, with the things themselves.”¹⁷ The object of a photograph is there before us in a photograph, and yet the object itself is not present. The photographed object is too much like the object to *not* be the object, yet we can’t do things to a photographed object that we can do to the actual object (touch it, walk around it, etc.). Cavell locates the source of this oddness in the way that photographs are made. Unlike paintings, they are produced automatically: “Photographs are not *hand*-made; they are manufactured. And what is manufactured is an image of the world.”¹⁸ He repeatedly uses the word “automatism” to describe this peculiarity: “Photography overcame subjectivity in a way undreamed of by painting...[a way] which does not so much defeat the act of painting as escape it altogether: by *automatism*, by removing the human agent from the task of reproduction.”¹⁹

¹⁷ WV 17. He qualifies this claim as something we *want* to say about photographs. Despite the fact that this is an obviously incorrect thing to say, he notes that we lack the resources to put this intuition any other way.

¹⁸ WV 20, original emphasis.

¹⁹ WV 23, original emphasis. The distinction between defeating an artistic problem and escaping an art is taken from Michael Fried’s remark on movies in his essay “Art and Objecthood,” reprinted in *Art and Objecthood: Essays and Reviews* (Chicago: University of Chicago Press, 1998), 164. Many of Fried’s remarks, drawn from conversations with Cavell, anticipate the theoretical parameters of *The World Viewed*.

That the photographic process satisfies an obsession with realism is a point Cavell takes from Bazin. But unlike Bazin (who locates the source of the obsession in the mummy complex), Cavell claims that “[s]o far as photography satisfied a wish, it satisfied...a human wish, intensifying in the West since the Reformation, to escape subjectivity and metaphysical isolation—a wish for the power to reach this world, having for so long tried, at last hopelessly, to manifest fidelity to another” (21). What he means by this is that photography’s natural connection to the world manifests a philosophical impulse to overcome the threat of isolation brought on by the skeptical doubt of other minds.

Cinema, for Cavell, doubles the problem of skepticism by paradoxically satisfying its basest wish: the desire to be isolated from the world. (This push-and-pull between the desire for isolation and the desire to overcome isolation is the major theme of Cavell’s analyses of philosophy (mainly Wittgenstein and Heidegger) and of art (from Beckett to Shakespeare).) Cinema, by screening reality from us, offers a concrete instantiation of skepticism by presenting a complete world, going along perfectly well without us, which we cannot touch. Essential to the experience of cinema as the world is the sense that it continues beyond the boundaries of the frame. This implied continuousness necessitates the sense of isolation from the world shown: “The implied presence of the rest of the world, and its explicit rejection, are as essential in the experience of a photograph as

As Cavell openly admits, his photographic parameters of thinking come from Erwin Panofsky's essay, "Style and Medium in the Moving Pictures" (1947 (1933)) and André Bazin's posthumously-translated collection of essays, *What is Cinema?* (1967); both of these works tend to locate film's unique contribution to the arts in the peculiarly automatic nature of the camera, placing cinema in an almost-uncomfortably-close relation to reality. Variations of this realist strain form one of the primary tropes of classical film theory, before "film studies" had coalesced into an academic discipline. Similar claims have been made by film theorists Rudolph Arnheim and Siegfried Kracauer,²⁰ and by film critics Robert Warshow and Manny Farber.²¹ But, as Noël Carroll notes, the tradition of realist film theory effectively *ends* with Cavell, in the transition from classical film theory to contemporary film theory.²² After Cavell, it seemed undesirable to put such faith in the camera.

what it explicitly presents. A camera is an opening in a box: that is the best emblem of the fact that a camera holding on an object is holding the rest of the world away." (24)

²⁰ In one respect Arnheim's theory runs counter to the realist line, as he emphasizes cinema's status as an art by the various phenomenal *differences* between a cinematographic projection and everyday perception: see Arnheim, *Film as Art* (Berkeley: University of California Press, 1971), 8-34. However, the account remains fundamentally realist in its focus, like Cavell's and Panofsky's, on what the camera *does* to the reality in front of it. He develops this point more strongly in the forward to the 1968 edition: "Confirmed again, it seems to me, is the observation that the film derives its principal strength from the realism of the photographic medium." In his 1966 lecture "Art and the Film Today," he does not mention cartoons but takes the painterly experiments of Norman McLaren, Oskar Fischinger, and Len Lye to be mere "venerable curiosities," evidence for him that "the cinema has scored its most lasting and most specifically cinematic successes when it drew its interpretations of life from authentic realism." Reprinted in Arnheim, *Film Essays and Criticism* (Madison: University of Wisconsin Press, 1997), 26.

Siegfried Kracauer lists animation as one of several technical matters that his theory does not discuss: "It would be fair to advise the reader at the outset that this book does not include all the things he may be looking for. It neglects the animated cartoon and avoids broaching problems of color. Certain recent developments and extensions of the medium are left undiscussed also." *Theory of Film: The Redemption of Physical Reality* (Princeton: Princeton University Press 1997, originally published by Oxford University Press, New York, 1960), vii.

²¹ See Robert Warshow, *The Immediate Experience* (New York: Doubleday, 1962) and Manny Farber, *Negative Space* (New York: Da Capo Press, 1971). Annette Michelson notes the similarities between Warshow and Bazin in "Screen/Surface: The Politics of Illusionism," *Artforum* 11.1 (September 1972), 58-61.

²² See Noël Carroll, *Philosophical Problems of Classical Film Theory* (Princeton: Princeton University Press, 1988), 9. As D.N. Rodowick notes, Cavell's book also effectively forms the last stand of the ambitions of classical film theory

By the time Cavell published his particular version of realism, the theory had been largely discredited by the increasingly scholarly criticism of film.²³ Such a strong reliance on the photographic process seemed to betray a naïve belief in the supposed transparency of the image, de-emphasizing the heavily mediated and conventional nature of editing, lighting, framing, and so on. What counted as a legitimate use of film—what even counted *as* a film, period—seemed exceptionally restrictive. The theory seemed to leave itself open to all kinds of counterexamples. The most obvious of these was animation, an artistic use of film technology that betrays *no* reliance on a photographic transcription of reality.²⁴ Gerald Mast’s “What Isn’t Cinema?” indicts the entire realist tradition (along with Eisenstein, Gene Youngblood, Christian Metz, and Hugo Münsterberg) for failing to offer a workable definition of cinema with a gesture “so simple that it requires a simple sentence for all nine of these theorists. Not one of them discusses animation as a relevant form of cinema. Nor do they even develop terms, categories, and criteria

(or, as he puts it, “along with Siegfried Kracauer’s *Theory of Film*...the last great work of classical film theory”). See Rodowick, *The Virtual Life of Film* (Cambridge: Harvard University Press, 2007), 79.

²³ See Pauline Kael, “Is There a Cure for Film Criticism? Or, Some Unhappy Thoughts on Siegfried Kracauer’s *Theory of Film: The Redemption of Physical Reality*,” reprinted in *I Lost It at the Movies* (Boston and Toronto: Little, Brown and Company, 1965), 269-292, Richard Corliss, “The Limits of Kracauer’s Reality,” *Cinema Journal* 10.1 (August 1970), 15-22, and Michelson, “Screen/Surface” and her critical review of Bazin’s thought, “*What Is Cinema?*,” *Artforum* 6.10 (Summer 1968), 67-70.

I say “increasingly scholarly” (even including Kael in this trend) because the common criticisms leveled at realist film theory (especially Kracauer) are of a scholarly kind: namely that there is a misfit between what a *theory* of film should be and what *criticism* of film should be. Kracauer’s work comes off as too theoretical to be a work of criticism, and yet too dictated by the author’s own tastes to be taken seriously as theory. The result is commentaries like Corliss’s, which on the one hand claim that an *a priori* photographic theory of film leaves no room for the vagaries of taste, and on the other hand claim that the “theory” is nothing but a set of Kracauer’s favorite movies.

²⁴ This is not to say that the camera has *no* place in the process of animation, but that the camera has no clear *explanatory* role. Although cartoon drawings were obviously photographed and printed on to a film strip for projection, it was not the camera that guaranteed the appearance of movement, but the ways that the drawings were configured.

that can apply to animated films. And if animation is not a unique cinematic form, what is?”²⁵

Philosopher Douglas Lackey’s 1973 review of Cavell’s book in the *Journal of Aesthetics and Art Criticism* uses the animation counterexample as his first objection to the theory: “First of all, Cavell’s claims, and Panofsky’s and Bazin’s, do not apply to animation or to abstract films...”²⁶ Most directly, Alexander Sesonske (first at a symposium on the book in 1972 and then in print in 1974) inverts Cavell’s own language on film’s ontology to note the exclusion of cartoons:

[N]either these lively creatures nor their actions ever existed until they were projected on the screen. Their projected world exists only *now*, at the moment of projection—and when we ask if there is any feature in which it differs from reality, the answer is, “Yes, every feature.” Neither space nor time nor the laws of nature are the same. There is *a* world we experience here, but not *the* world—a world I know and see but to which I am nevertheless not present, yet not a world past. For there is no past time at which these events either did occur or purport to have occurred. Surely not the time the drawings were made, or the frames were photographed; for the world I know and see had not yet sprung into existence then. It exists only now, when I see it; yet I cannot go to where its creatures are, for there is no access to its space from ours except through vision.²⁷

The status of animation in all these criticisms is uniformly that of counterexample. The point of bringing up the matter of animation is not to prompt a more detailed study of its particularities but to burst open the hermetic bubble of the realist’s criteria of film. Animation is merely the most obvious example of what is held as a general neglect of cinema’s possibilities for

²⁵ Gerald Mast, “What Isn’t Cinema?” *Critical Inquiry* 1.2 (December 1974), 374. (Of course, Eisenstein *did* write a substantial amount on animation, but those writings had not yet been translated.) Mast remarks in a footnote that the first edition of Mast and Cohen, *Film Theory and Criticism: Introductory Readings* (New York: Oxford University Press, 1974) contains selections by Gilbert Seldes and Joe Adamson which grapple with theoretical problems of animation. See Gilbert Seldes, “The Lovely Art: Magic” and Joe Adamson, “Suspended Animation,” in Gerald Mast and Marshal Cohen, eds., *Film Theory and Criticism* (New York: Oxford University Press, 1974), 379-390 and 391-400, respectively.

Also noteworthy is an issue of *Cinema Journal* that offers substantial coverage of animation (albeit in the form of pieces by practitioners of animation Chuck Jones and Howard Reider, and reviews of Stephenson’s *Animation in the Cinema* and Richard Schickel’s *The Disney Version*). See *Cinema Journal* 8.2 (Spring 1969).

²⁶ Douglas Lackey, “Reflections on Cavell’s Ontology of Film,” *Journal of Aesthetics and Art Criticism* 32.2 (Winter 1973), 271.

²⁷ Alexander Sesonske, “The World Viewed,” *The Georgia Review* 28.4 (1974), 563-564.

manipulation. It rests more or less on the same ontological plane as ploys in feature-length films (like painted sets or the intrusions of editing).²⁸

Cavell responds to these objections, indicatively, not by revising or redacting his commitment to realism, but by reinforcing it. In an addendum to the 1979 edition of his book, he splits the intended force of the objection into two types of examples: artifice in otherwise realistic feature-length films, and cartoons. Painted sets, special effects, and editing, Cavell claims, all count as particular ways of *acknowledging* reality, and thus confirm his theory of the camera's priority. Because a camera by nature passively records all and only that which is in front of it, fooling the camera with painted backdrops or rear projection clearly speaks to that nature of the camera (e.g., to the nature of its view to reach all the way to the horizon).²⁹ Cartoons, for Cavell, confirm his theory in a different way. They cannot be said to cheat the camera's natural affinity for reality. Reality is obviously not a standard for the cartoon. Therefore, contrary to the intuition upon which the objection from animation relies (e.g., Mast's "if animation is not a unique cinematic form, what is?"), they simply do not count as movies:

[Sesonske's remarks] do not prove that my claims are false except on the assumption that cartoons are movies. ...But on my assumption (which I no doubt should have made

²⁸ Experimental film is also an obvious candidate here, but a detailed discussion of the objection and Cavell's response lies outside the scope of my analysis. Cavell's response to the problem of experimental film is essentially that "experimental" film as a category as yet says nothing about the significance of such examples of film.

²⁹ WV 195-199. His point on editing is slightly more complex but is also a matter of acknowledgment: an emphasis on editing is only an emphasis on technique, and technique is only one of many contingent facts about a work of art unless it can contribute to a critical description of it (that is, acknowledge something more significant). "Reality," as something *to be acknowledged* (rather than a tool which may or may not be used to acknowledge something) provides a fulcrum for criticism in a way that editing cannot. He says of the encyclopedic manipulations of *The Man with the Movie Camera* (Dziga Vertov, 1929): "It is a natural example for someone to appeal to who wishes to emphasize film's independence of reality. But it is fully open to me to say that what this film shows is precisely the inescapability of reality, its fixed point within every brilliance of technique. ...It is only within this theoretical issue that a simpler fact about this film's declaration of reality can make itself felt, viz., that all virtuosity of technique is quite overwhelmed, or silenced, by a shot of childbirth." (191-192)

explicit) that cartoons are not movies, these remarks about their conditions of existence constitute some explanation about *why* they are not.³⁰

Cavell then offers a set of critical remarks that build on Sesonke's own inversions of Cavell's prose, intended to distinguish cartoons from movies.³¹

This seems a direct admission of realist film theory's dismissal of animation, and one can find contemporaneous examples that *do* go so far as to jettison animation from the greater aesthetic potentials of movies.³² Yet a distinction is not a dismissal, and a realist project like Cavell's is not so opposed to a serious investigation of animation as it may appear to be. Separating cartoons from movies allows Cavell to maintain his commitment to the camera's specificities; at the same time, he echoes a celebratory conception of animation that, for decades, fit very comfortably with the idea that cartoons are not movies.

Cavell is able to do this because of his conception of what an artistic medium is. He does not say "animation lacks a true cinematic ontology," or something similarly worded to call attention to differences of instrumental basis. Instead, he retains the connotations of two specific instances of film's technological use, with their respective conventions and examples. Even when he half-jokingly suggests a possible definition of cartoons as "successions of animated world projections,"³³ an equal and opposite to his description of cinema's material basis as "a

³⁰ WV 168, original emphasis.

³¹ WV 169-173.

³² Andrew Sarris was not impressed with the new noncartoon animation, and he took this to be a confirmation of the form's minor place in film history, on the grounds that it is a less sophisticated means of satisfying (as per Bazin) "our obsession with likeness," and so cannot compete with photographic film. See Sarris, "How Animated Are Cartoons (2)," *Village Voice* 14.37 (26 June, 1969), 43, 47. See also Arnheim, "Art and the Film Today," op. cit.

³³ WV 173.

succession of *automatic* world projections,”³⁴ he immediately disqualifies such a definition as unhelpful on its own. Matters of ontology in art, for Cavell, are fundamentally matters of historical significance. That significance, he claims, can only be assessed by selectively noting what *instances* of film have thus far been significant. In defining an ontology of film (which entails a justification of why film should be called *art*), one needs to begin with a particular corpus of significant films—even while knowing full well that what counts as a “significant film” can never be fully agreed upon and that definitions and standards inevitably change over time.³⁵ Accused of medium-essentialism, he responds that one of his major goals in writing the book was to argue *against* the idea that film has natural, essential properties that *a priori* separate it from other arts:

[A] declaration of the nature of film’s “differences” from other artistic media—a declaration of cinematic “essence”—was apt to be called for and likely to be fruitless. Whatever one may mean by the “essence” of a medium of art, its sense can only be specified by the achievements of that art itself. The declaration of film’s essence I had heard most frequently was that it consisted of “light and movement.” That seems the natural, the only, answer to the isolated and persistent question, “What is the essence of the medium of film?” Since the answer seems to me more or less empty, I take the

³⁴ WV 72, emphasis altered. Cavell’s text italicizes the entire phrase for emphasis, and follows with a brief explication of each part of the phrase: “‘Succession’ includes the various degrees of motion in moving pictures; the motion depicted; the current of successive frames in depicting it; the juxtapositions of cutting. ‘Automatic’ emphasizes the mechanical fact of photography, in particular the absence of the human hand in forming these objects and the absence of its creatures in their screening. ‘World’ covers the ontological facts of photography and its subjects. ‘Projection’ points to the phenomenological facts of viewing, and to the continuity of the camera’s motion as it ingests the world.” (72-73)

This reads like a basic definition of cinema as an artistic medium, but it is not intended exactly to function as one. The “succession of automatic world projections” is “[t]he material basis *of* the media *of* movies (as paint on a flat, delimited support is the material basis of the media of painting)” (emphasis added), a twofold distancing from what a “medium” is. First, movies are “media,” not a medium—multiply-inclusive of different techniques, types, and conventions. Second, successions of automatic world projections only offer a *material basis* for the media; the conditions themselves do not constitute the media, because there is nothing in such a definition to suggest that those conditions can qualify as art. Cavell makes this qualification for the same reason that it takes him almost half the book to offer the generalization: he holds that such generalizations about art have to be earned through first demonstrating their significance.

³⁵ See Cavell, “Music Discomposed,” in *Must We Mean What We Say? Updated Edition* (Cambridge: Cambridge University Press, 2002), 180-212.

question to be more or less the wrong question to ask. In particular, I have seen no objects consisting essentially of light and movement (and essentially of nothing else) that have struck me as having the force of art. And since the objects of film I have seen which do strike me as having the force of art all incontestably use moving pictures of live persons and real things in actual spaces, I began my investigation of film by asking what *role* reality plays in this art.³⁶

Cavell's attraction to realist film theory is not defined by any *a priori* principle but by an explanatory force it seems to hold over what has made a group of films so powerful for him. He makes the same point regarding the role of technology in film aesthetics in an earlier parenthetical remark: "The common appeal to technological properties [in film theory and criticism] is caused in part by a sense that the sheer *power* of film is unlike the power of the other arts. I share this sense, and I agree that this power is essentially related to film's technology. But the aesthetic role of this technology is [not] specified by studying it apart from its specific achievements in significant films..."³⁷

The role played by this technology is what Cavell calls "automatism," the fact that the camera manufactures an image of the world. But this is a description only of a technology, not of art. So Cavell goes on to use the word "automatism" interchangeably with the more conventional term "medium," and expands "automatism" to a tripartite definition that relates film technology to the history of the arts. Automatism is only "automatic" in the strict sense of *machinelike* in referring to the camera's operation. In a second sense, automatisms are "automatic" in being a set of shared conventions that collectively define what an artform is.

³⁶ WV 164-165, original emphasis.

³⁷ WV 164, original emphasis. Cavell's point is that, however idiosyncratic one's tastes may be, they are not arbitrary but compelled. However counterintuitive and narrow Cavell's canon of mostly-classical-Hollywood examples might be, he insists that these are *his* canon given by experience; he is stuck with them. If he forfeits his canon, he forfeits any right to talk about movies as an art, because it is by those examples that Cavell is compelled to call movies an art in the first place.

They function as rules do in a language, guaranteeing a possibility of communication and standards for evaluation, and subject to change over time: “in mastering a tradition one masters a range of automatisms upon which the tradition maintains itself, and in deploying them one’s work is assured of a place in that tradition.”³⁸ In a third sense (relying on the term’s affinity with surrealism), an automatism can be an experiment, as in modernist painting. More specifically, it is an unforeseen discovery that a hitherto-unexplored option of artistic technique (like Frank Stella’s creation of irregularly-shaped canvases or Jackson Pollock’s drip painting) can count as a valid example of the art. This third sense may seem unnecessary to Cavell’s account of film, since he is so insistent on calling the movies a traditional (and not an experimental or modern) art, but it underscores the nature of *all* automatisms as beginning as accidents, out of the artist’s hands to an extent—as Cavell puts it, the sense of artworks happening of themselves.³⁹ Film as a set of automatisms is largely a matter of filmmakers discovering (sometimes singularly, sometimes collectively) what accidents work on film as art and how to systematically exploit their mysteries (for instance, what a movie star’s particular allure might be on camera and how to build around that allure). And for those like Cavell who seek to make sense of the art of film not as artists but as theorists, the only way to make sense of it is to let films *happen* to them and “discover” what has worked. The automatism of the camera is not an atemporal principle but a contingent discovery.

³⁸ WV 104.

³⁹ “My impulse to speak of an artistic medium as an ‘automatism’ is, I judge, due first to the sense that when such a medium is discovered, it generates new instances... Second, the notion of automatism codes the experience of the work of art as ‘happening of itself.’ ...A third impulse...is to register the sense that the point of this effort is to free me not merely from my confinement in automatisms that I can no longer acknowledge as mine...but to free the object from me, to give new ground for its *autonomy*.” WV 107-108, original emphasis.

For Cavell, in other words, an “ontology of film” is not an exhaustive description of all possible examples of film (as the animation counterexample tended to demand), but a *power of the movies*. If we consider realist film theory’s reliance on the camera’s automatism as a power that moving pictures may or may not make use of (rather than something like a teleology or a natural kind), the motivations for Cavell’s remarks on cartoons, especially his need to describe some of cartoons’ significant features, their relation to his realism becomes clear. Like the realists, Cavell is at least as interested in criticism as he is in theory—or, better put, in a kind of theory which emerges from acts of criticism. It is exactly this imperative to criticism that drives Cavell’s remarks on cartoons.

3. The plasmatic world-view

Cavell’s remarks on cartoons effectively follow another tradition of criticism: a set of consistencies that loosely make up a widely-held idea of what the classical Hollywood cartoon was capable of doing and what made it interesting—what its powers were.⁴⁰ These consistencies

⁴⁰ What’s strangest about Cavell’s notes on cartoons, in fact, is how orthodox they are, in comparison to the constant qualifications he makes of Bazin and Panofsky on realism. This feature is one of many hints that Cavell is going through the motions here, not convinced of the urgency either of Sesonke’s objection or of cartoons as a significant artform. His canon of examples (the crucial starting-point for a film theory of his stripe) is erratic and not quite his own; rather than strongly incorporate Disney as the central case, he defers that Sesonke’s own standard of Disney as exemplar is “fair enough” (WV 167); he admits he has not seen *Bambi* (and then goes on to talk about it anyway); his cases are limited to broad tendencies of characters like Popeye and vague traits of cartoon laws and appearances. He even seems to forget that one of his central theoretical texts, Panofsky’s “Style and Medium,” discusses cartoons in detail, neglecting to cite it. The only exception of originality seems to be his remarks on cartoon sexuality, extrapolating that Mae West’s sexuality can successfully be translated to cartoons in a way that Marilyn Monroe’s cannot (on the grounds that West *already* inhabits a caricature of sexuality).

It might, from these hints, be objected that I make too much of Cavell’s remarks, that he lacks the conviction to make a convincing case regarding cartoons (and thus fails by his own standard of criticism). But what matters here, for my purposes, is that the *logic* of his criticism holds up: that upholding realism as superlatively

add up to what is generally agreed among contemporary animation scholars as *the* central concept of animation, the *plasmatic* account. The term “plasmatic” is taken from (as Scott Bukatman dubs it) the *ur-text* of animation studies,⁴¹ Sergei Eisenstein’s notes on Disney, written between 1940 and 1946, and not available in English translation until 1988.⁴² Eisenstein admired Disney as much as any moviegoer in the world and locates the primary aesthetic significance of Disney’s practice in the peculiarly elastic qualities of his figures: horses’ necks and legs stretching, ocean waves transforming into boxing gloves, characters who combine traits of multiple animals, and so on. Such wonders, for Eisenstein, all have essentially the same attraction: our desire to identify with a form of life that is free from the fetters of the human body and the laws of physics.

[Y]ou can’t help but arrive at the conclusion that a single, common prerequisite of attractiveness shows through in all these examples: a rejection of once-and-forever allotted form, freedom from ossification, the ability to dynamically assume any form.

An ability that I’d call “plasmaticness”, for here we have a being represented in drawing, a being of a definite form, a being which has attained a definite appearance, and which behaves like the primal protoplasm, not yet possessing a “stable” form, but capable of assuming any form and which, skipping along the rungs of the evolutionary ladder, attaches itself to any and all forms of animal existence.⁴³

The plasmatic tradition of animation theory arose out of critical observations on American cartoons. The tradition is part and parcel with what Douglas Gomery identifies as the “craze for

cinematic does not logically entail a dismissal of cartoons, and that Cavell does not *need* to cite Panofsky to repeat the gist of Panofsky’s discussion.

⁴¹ See Scott Bukatman, *The Poetics of Slumberland: Animating Spirits and the Animating Spirit* (Berkeley: University of California Press, 2012), 106.

⁴² See Sergei Eisenstein, *Eisenstein on Disney*, trans. and ed. Jay Leyda (London: Methuen, 1988).

⁴³ Eisenstein, 21. In typically cosmopolitan Eisenstein fashion, he also finds plasmaticness in *Alice in Wonderland*, German caricaturist Walter Trier, 18th century Japanese etchings, and the “human snake” circus performer (11-12).

cartoons” that gathered around Disney’s early 1930s shorts.⁴⁴ Describing the appeal of cartoons in plasmatic terms relied at least as much on the conventions and techniques of the “Golden Age” of animation—especially on the fact that the figures were drawn—as it did on the more general fact that cartoons were nonphotographic. What one finds across the plasmatic tradition is an implicit agreement with Cavell’s claim: that cartoons were special precisely because they did things that the movies did not do.

Panofsky himself in “Style and Medium in the Motion Pictures” regards the cartoon as an extremely important exception to the cinematic medium as “reality as such.”⁴⁵ Disney is a recurring point of reference in Panofsky’s picture of cinema as “the only visual art entirely alive.”⁴⁶ Unique among his examples, cartoons are celebrated as “a chemically pure distillation of cinematic possibilities.”⁴⁷ Not only do its frame-by-frame manipulations allow for a perfect

⁴⁴ See Gomery, *Shared Pleasures* (Madison: University of Wisconsin Press 1992), 137. It is in this context that Gomery notes the opening of a short-lived all-cartoon theater in New York in 1934. Gomery places 1934 as the date of the cartoon craze, set off by Disney’s foray into Technicolor, but in timing and emphasis, the crucial point for critical celebrations of Disney was his use of synchronous sound.

Synchronous sound was as central to celebrations of Disney as the traits I discuss in this chapter, but its implications rest outside the range of the current project.

⁴⁵ Panofsky frankly admits the cartoon’s exceptional status in his famous declaration of cinema as fundamentally photographic: “It is the movies, and only the movies, that do justice to that materialistic interpretation of the universe which, whether we like it or not, pervades contemporary civilization. *Excepting the very special case of the animated cartoon*, the movies organize material things and persons, not a neutral medium, into a composition that receives its style... The medium of the movies is physical reality as such...” “Style and Medium in the Motion Pictures,” reprinted in Gerald Mast, Leo Braudy, and Marshall Cohen, *Film Theory and Criticism: Introductory Readings*, 4th ed. (New York and Oxford: Oxford University Press, 1992), 247, emphasis added. I rely here on the final version of Panofsky’s essay from 1947, which Cavell himself quotes. For more on the history of Panofsky’s essay and Cavell’s debts to it, see Thomas Y. Levin, “Iconology at the Movies,” *Yale Journal of Criticism* 9.1 (1996), 27-55.

⁴⁶ Panofsky, 234. By “entirely alive” he means in touch with a large public audience, in contrast to “all the serious lyrical poets, composers, painters and sculptors” (234). Cavell’s theory continues this theme.

⁴⁷ Panofsky, 239.

formal integration of space and time singularly suited to the cinema,⁴⁸ but its broad generic preferences retain the earliest appeals made to moving picture audiences (“sadism, pornography, the humor engendered by both, and moral justice”).⁴⁹ No other kind of film is claimed by Panofsky to encompass *all* these possibilities at once. In a sense dictated by means of production, the cartoon appears marginal; but in its form and content, the cartoon is practically a condensation of what it means to be a movie.⁵⁰

Especially indicative is a revision Panofsky makes of the essay between 1934 and 1947 regarding *The Cabinet of Doctor Caligari* (Robert Wiene, 1920), which seems to anticipate Cavell’s own theoretical moves of reality and acknowledgment. While Panofsky’s original essay had praised *Caligari*, the revision declares that the need to compose film from the material world itself is aesthetically unavoidable, and the proof of this lies in *Caligari*’s historical failure:

To prestylize reality prior to tackling it amounts to dodging the problem. The problem is to manipulate and shoot unstylized reality in such a way that the result has style. This is a proposition no less legitimate and no less difficult than any proposition in the older arts.⁵¹

⁴⁸ Panofsky defines film generally as “*dynamization of space*, and, accordingly, *spatialization of time*” (235, original emphasis). Note that this defines film phenomenologically, in terms of its impressions on a spectator, rather than by its means of production (realistic or otherwise). This allows Panofsky to note that “[Disney films’] fantastic independence of the natural laws gives them the power to integrate space with time to such perfection that the spatial and temporal experiences of sight and hearing come to be almost interconvertible” (239-240).

⁴⁹ Panofsky, 239. This list echoes Panofsky’s list of the ways in which film “appealed directly and very intensely to a folk art mentality” (234-235). There is an interesting doubling-down of the cartoon’s powers here that seem to place Disney at the very pinnacle of Panofsky’s canon: The movies are a folk art through and through, and the cartoon is the folkier of movies.

⁵⁰ This level of celebration of Disney is not atypical. Lewis Jacobs, for instance, gives Disney pride of place as “perhaps the finest expression of motion picture art in contemporary America.” See Jacobs, *The Rise of the American Film* (New York: Teachers College Press, 1968 (1939)), 495. Disney is the only filmmaker contemporary to Jacobs’s writing to receive an entire chapter of analysis.

⁵¹ Panofsky, 248.

The unavoidability of aesthetic problems plays a key role in the modernist criticism of art historian Michael Fried, from whom Cavell draws much of his own thinking on art. For Fried it is through a logic of unavoidability that aesthetic issues become moral imperatives; a great painter is judged by the perceptiveness with which he is able to perceive a problem in the art of painting, and the conviction with which he works through the problem. Problems in an artform must, as a matter of aesthetics *and* of ethics, be *acknowledged*.⁵² Acknowledgment plays a large role in Cavell's own philosophy, and in his aesthetic sensibility.⁵³

A categorical insistence that "there is no running away from"⁵⁴ the problems of film's material basis seems to all but demand a complementary condemnation of cartoons. Yet Panofsky's revision, while dismissing *Caligari*, *clarifies* and *strengthens* his remarks on Disney, criticizing *Snow White and the Seven Dwarfs* (1937) and *Fantasia* (1940) for straying from the cartoon's purity. The cartoon seems to stand in a relation to reality as the movies stand in relation to modern art: they do not *avoid* its problems, they *escape its conditions entirely*. They effectively construct an entirely other world, a world where *escape* is the whole point.⁵⁵ By

⁵² "Once a painter who accepts the basic premises of modernism becomes aware of a particular problem thrown up by the art of the recent past, his action is no longer gratuitous but imposed. He may be mistaken in his assessment of the situation. But as long as he believes such a problem exists and is important, he is confronted by a situation he cannot pass by, but must, in some way or another, pass through; and the result of this forced passage will be his art. This means that while modernist painting has increasingly divorced itself from the concerns of the society in which it precariously flourishes, the actual dialectic by which it is made has taken on more and more of the denseness, structure and complexity of moral experience – that is, of life itself, but life lived as few are inclined to live it: in a state of continuous intellectual and moral alertness." (*Three American Painters*, 9-10)

⁵³ See his essays "Knowing and Acknowledging" and "The Avoidance of Love: A Reading of King Lear," in *Must We Mean What We Say?*, 238-266 and 267-356, respectively. Cavell specifically addresses the overlap between Fried's aesthetic sense of acknowledgment and his own moral sense of the term in WV 239N40. It is, I suspect, partly Panofsky's moral tone of unavoidability of reality that appealed to Cavell.

⁵⁴ Panofsky, 248.

⁵⁵ "Escape" is a curiously undertheorized term in Cavell's thought, given that the difference between "escaping" and "avoiding" is the difference between whether or not film counts as a legitimate art. However, it is precisely the lack of previous conceptual baggage in the term "escape" for Cavell that allows him to build a film theory. He

means of escape, the very traits thought to contribute to the cartoon's irrelevance and invisibility—its ephemerality, its lightness of touch, its frank appeal to the childlike, its lack of obligation to physical rules or moral consequences—become its aesthetic virtues.

Particular versions of the plasmatic account vary, but the concept is generally characterized by a will toward escape, by means of two interconnected assumptions. First, cartoons are said to carry an inherent promise (or sometimes a threat) of freedom from the physical laws of the world, a promise underwritten by their difference from live-action movements. Gilbert Seldes' 1932 review of some early *Silly Symphonies* claims more generally that the cartoon's pleasure "is our pleasure in magic, in seeing the impossible happen. ... In the early days we looked at a movie and marveled that a picture could be set into motion. Now we do not think of the picture—only the actors. The animated cartoon shows us in movement something naturally inert, and it is essentially the satisfaction of magic we get out of it."⁵⁶

Cavell notes that cartoon characters' bodies never seem to get in the way of what they want to do, and "we are uncertain when or to what extent our laws and limits do and do not apply (which

needs a *different word* from "avoid," and its difference justifies a new theory. The term "escape," in other words, is an escape-hatch for Cavell from avoidance.

I freely admit that putting Panofsky's thoughts into Cavell's language (specifically the term "escape") is anachronistic, but I believe the difference between "avoidance" and "escape" captures the spirit of Panofsky's logic. The implication of avoidance is deferral, putting a matter off until later. (Derrida develops the concept of *différance*, for example, in part to demonstrate that new paradoxes are endlessly produced in philosophy by deferring its old problems, and that the new paradoxes are functionally identical to the old problems). Escape is an irreversible act of its own, fleeing to an entirely different arena with an entirely different set of problems. (The political thrust behind Deleuze and Guattari's "lines of flight," for example, is that there are no constrictions that are inescapable: there is always a way out, through a new path or into a new territory, and finding a way out may be as simple as choosing a new concept and following where it takes you.) By avoidance, old problems remain, to inevitably return. By escape, there is no return; the old and the new are incommensurable. Panofsky's logic in continuing to celebrate the cartoon, as I understand it, is that, in viewing or criticizing a cartoon, holding up physical reality as a problem simply makes no sense. The problems borne by the laws of physical reality in live-action filming (like his examples of "the physical reality of engines and animals, of Edward G. Robinson and Jimmy Cagney" (247)) do not apply, because the laws of physical reality are no longer valid.

⁵⁶ Seldes, "Disney and Others," *New Republic* 71.914 (2 June, 1932), 102.

suggests that there are no real *laws* at all).”⁵⁷ Panofsky approvingly refers to the cartoon’s “fantastic independence of the natural laws.”⁵⁸ For us to participate in this pleasure, the creatures have to be at the same time metamorphic *and* anthropomorphic. Not only do they need to be able to stretch their limbs (as per Eisenstein) or resemble sawmills (as Seldes notes of the titular characters in *The Busy Beavers* (Burt Gillett, 1931)), but they need to possess humanlike features and personalities, caricatured faces and bodies.⁵⁹ Even fire, in Disney shorts like *Hell’s Bells* (Ub Iwerks, 1929) and *Flowers and Trees* (Burt Gillett, 1932), runs and leaps on rubbery legs.⁶⁰ Panofsky writes: “No object in creation [in the cartoon], whether it be a house, a piano, a tree or an alarm clock, lacks the faculties of organic, in fact anthropomorphic, movement, facial expression, and phonetic articulation.”⁶¹ Seldes and Panofsky take pains to note this pleasure as a continuation of the sheer delight in watching the wonder of movement endemic to the earliest motion picture screenings, a delight that became diluted once the illusion was taken for granted and focus shifted to dramatic situations and performance.

But the spectatorial roots of the cartoon (wherein lies the second key assumption) are claimed to go back much farther than the beginning of moving pictures. Seldes insists on

⁵⁷ WV 170, original emphasis. Cavell returns to this potential mix of giddiness and terror in *The Claim of Reason*: “in such a world [as in cartoons] the (our) concept of evidence has no application; anything can be followed by anything. Cartoons make us laugh because they are enough like our world to be terribly sad and frightening.” See Cavell, *The Claim of Reason* (New York: Oxford University Press, 1979), 236.

⁵⁸ Panofsky, 239.

⁵⁹ Eisenstein in particular gives detailed thoughts on Disney’s use of animals, the choices of which often make satirical connections to particularly human traits, which he traces back to La Fontaine’s fables. See Eisenstein, 33-40.

⁶⁰ Eisenstein locates a precedent to plasmaticness in the attraction of fire, as a phenomenon which is naturally-occurring, formally pure (in its intensity of color and monotonous rhythmic activity), and organic, a consuming, breathing, all-but-living thing. See 24-33.

⁶¹ Panofsky, 240.

describing cartoons as “[m]agic—not illusion.”⁶² The root of the cartoon’s appeal to the spectator is typically explained by reference to modes of belief or understanding that are neither modern nor mature—modes that are somehow a persistence of things in which we believed as children or gods to whom we appealed before modern science. Whether this past is real or an imaginary nostalgic construction makes no difference: what counts is the *feeling* of a return to a world of animism. Eisenstein claims: “The very idea, if you will, of the animated cartoon is like a direct embodiment of the method of animism.”⁶³ Cavell, for his part, states that the animated world’s appeal lies in its being “animistic. There is, of course, no general problem of achieving conviction in such a world; it taps perhaps the most primitive convictions about the world.”⁶⁴ It is, presumably, our willingness to see a world in anthropomorphic terms that enables us to take cartoons as expressing emotions more simply and purely. Its simplifications set the stage for its peculiar emotional timbres. For Panofsky, cartoons bring out the oldest folkloric tropes of sadism, moral justice, and crude physical humor in all their contradictory glory.⁶⁵ For Eisenstein, the sheer overwhelming beauty of Disney’s films is like that of nature, in distilled and purified form.⁶⁶ Through especially this trait of primitive conviction, Cavell’s picture of

⁶² Seldes, 102.

⁶³ Eisenstein, 44.

⁶⁴ Cavell, 169.

⁶⁵ Panofsky, 239.

⁶⁶ Eisenstein insists on describing Disney in one passage by a series of analogies to nature itself, “as the purest model of *inviolably-natural* elements, characteristic of any art and here presented in a chemically pure form. Here it’s like an aroma given without a flower; a taste extracted from a fruit; sound as such; affect freed from any purpose.” (10, original emphasis.) This passage, which runs from 9-10, considerably complicates the picture of cartoons as a mere temporary relief from the constrictions of industrial capitalism typically attributed to him. The implication of such an interpretation is that plasmaticness is ultimately a sedative whose isolated sensation is of no use for instilling moral or political change. Vivian Sobchack quotes Eisenstein to this effect in “Animation and Automation, or, the Incredible Effortfulness of Being,” in *Screen* 50.4 (2009), 390. Rosalind Krauss, following Keith

cartoons is able to fit comfortably with his picture of film as two complementary species of Romanticism, a means of restoring our connection to the world thought to be thrown into question with the advent of philosophical skepticism.⁶⁷ Like the movie, the cartoon escapes what are thought to be nearly-unbearable burdens of modernity through escape, through magic.⁶⁸

More generally, Cavell as a *realist* is paradoxically able to fit comfortably with the *plasmatic* tradition of cartoons because the two traditions consider cinematic ontology as power: a set of stylistic uses of a medium used in particularly significant ways. (Attesting to this point is

Broadfoot and Rex Butler, goes so far as to claim that the fluidity of plasmaticness is functionally equivalent to the liquidity of capital (16). See also Broadfoot and Butler, "The Illusion of Illusion," in Alan Cholodenko, ed., *The Illusion of Life: Essays on Animation* (Sidney: Powers Books, 1991), 272.

Eisenstein *does* sometimes write like this; for example, he claims that Disney's works give oppressed Americans the gift of temporary *obliviousness*, and that "if most of [the cartoons] didn't flash by us so quickly in one or two short little reels, we could be made angry by the moral uselessness of their existence on the screen" (8). However, in the earlier cited passage, Eisenstein goes on to characterize this "obliviousness" as "simply 'beyond good and evil'". Like the sun, like trees, like birds, like the ducks and mice, deer and pigeons that run across his screen." (9) Disney is not like candy but like the song of a bird. He refuses to claim any real triviality or failure (or implication in capitalism) to Disney. What I take this to mean is that the ephemerality of cartoons for Eisenstein is of a fundamentally different kind than the ephemerality of mere amusement. It is an ephemerality that connotes a Romanticist re-connection with the world *beyond* the modern products of man (socialist or capitalist), not an image of abstraction from physical instantiation as such (as would have to be the case for an analogy to capital); as such its pleasures are durable and unimpeachable.

⁶⁷ Cavell sums up this theme of his philosophy as follows: "At some point the unhinging of our consciousness from the world interposed our subjectivity between us and our presentness to the world. Then our subjectivity became what is present to us, individuality became isolation. The route to conviction in reality was through the acknowledgment of that endless presence of self. ...To speak of our subjectivity as the route back to our conviction in reality is to speak of romanticism. Perhaps romanticism can be understood as the natural struggle between the representation and the acknowledgment of our subjectivity..." (WV 22) Romanticism pervades as a theme throughout the book. *Every* successful example of art, for Cavell, counts under this rubric of Romanticism, from film to modernist painting.

⁶⁸ Cavell claims that in live-action film, the human wish for the world re-created in its own image (taken from Bazin) is satisfied "magically" (WV 39). This does not mean that the automatism of the camera works by some mysterious otherworldly process, but that the sense of "magic" in movies comes from the fact that the world is presented to the viewer without the viewer having to go through the trouble of interacting with it: "How do movies reproduce the world magically? Not by its literally presenting us with the world, but by permitting us to view it unseen. This is not a wish for power over creation (as Pygmalion's was), but a wish not to need power, not to have to bear its burdens." (WV 40)

The magic of cartoons, in Cavell's language, can be said to offer a complimentary pleasure to this: severing the sense of power from any responsibilities attached to it. All actions seem equally possible and infinitely reversible.

the fact that at least two “realists,” Panofsky and Manny Farber, found no problem with celebrating cartoons.) As such, the notions of freedom and escape invoked by the idea of plasmaticness are peculiarly suited to the form of cartoons (and not necessarily the more general technique of “animation”). Plasmaticness is not guaranteed by the instrumental basis of frame-by-frame manipulation; it must be *utilized* by the cartoonist in relation to a set of conventions. Plasmaticness, much like the question of “reality” for realists, operated as a theoretical-critical tool. It provided a means of explaining why the typical cartoon needed a different descriptive vocabulary than the typical feature film. It provided a more-or-less unified means of explaining how that vocabulary fit together (i.e., why different features of cartoons seemed to *need* each other). Finally, and perhaps most tellingly, it provided a means for judging cartoon work and explaining instances of dissatisfaction with it. Panofsky’s revised essay criticizes *Snow White* for introducing uninterestingly rigid human figures.⁶⁹ Eisenstein was “distressed” by *Bambi*—“by its complete failure, its absolute non-musicality of *landscape* and *color*.”⁷⁰ Manny Farber viewed *Bambi* as a complete betrayal of the cartoon sensibility, sickening in its sentimentality and dull in its lack of mobility: “The robust irrationality of the mouse comedies has been squelched completely by the syrup that has been gradually flowing over the Disney way. In an attempt to ape the trumped-up realism of flesh & blood movies, he has given up fantasy, which was pretty much the magic element.”⁷¹ Farber instead found a continuation of the cartoon

⁶⁹ Panofsky, 239. He also criticizes *Fantasia* for its choices of music that were not, in his words, “coexpressible” with cartoon imagery.

⁷⁰ In *Non-Indifferent Nature*, reprinted in *Eisenstein on Disney*, 98-99N70, original emphasis. Eisenstein finds fault with *Bambi*’s landscape and color for its effort to imitate naturalism, a softening of edges that worked against the spirit of the cartoon.

⁷¹ Manny Farber, “Saccharine Symphony,” in Robert Polito, ed. *Farber on Film: The Complete Film Writings of Manny Farber* (Library of America, 2009), 16. In this regard, see also Sedles, “Magic,” and Adamson.

aesthetic in the Warner Brothers stable of the 1940s, with its stylized drawings, brazen lack of moral content, and an innovation of strong individual personalities—the latter innovation taken from Disney, but drawn up only to be mocked endlessly.⁷²

As a characteristically (though not exhaustively) comic form, plasmaticness was an assured lowering of stakes from the world of feature films.⁷³ Characters openly defied death. Metamorphosis depicted not just a physical transformation, but the *freedom* of a pure will to transform—any transformation could be changed again, or taken back. (Compare: Eisenstein: “Disney’s beasts . . . have the habit of stretching and shrinking, of mocking their own form. . .”⁷⁴ and Cavell: “[Horror movies] play upon the fear that cartoons laugh at--irreversible metamorphosis.”⁷⁵) A freedom from consequences determines the ways in which impossible things are possible for cartoon forms. Recognizable figures easily overcome the limits of our own physical world, in recognizable ways.

Cel animation was peculiarly suited to these powers. Lines were drawn to have no texture of their own. Definite forms and spaces are not naturally suggested by lines and colors themselves but by artists putting them into combinations that suggest definite figures, and the space within a cartoon’s world is determined almost entirely by lines and colors. The metamorphic possibilities of cartoon bodies are a function of the multipurpose ambiguity of the

⁷² Farber, “Short & Happy,” in *Farber on Film*, 103-106.

⁷³ This is an important qualification: the threat of death *does* sometimes exist in cartoon shorts. But characteristically, the defiance of death is not considered a problem.

⁷⁴ Eisenstein, 4.

⁷⁵ WV 171.

drawn line.⁷⁶ This gives the cartoon world a homogeneity and harmony in which it can make intuitive sense for a character to stretch his neck or for waves to turn into boxing gloves; part of the wonder in plasmaticness lies in the deceptive simplicity of such transformations.

Additionally, the dominance of cel animation created an aesthetic homogeneity across cartoons as a whole, a more-or-less unified type of world in which these types of actions could take place. (Exceptions to this like George Pal's *Puppetoons* and the Fleischer studio's tabletop backgrounds are almost never mentioned as significant examples of cartoons.) The homogeneity of cel animation made for an easy transfer of qualities and expectations across diverse studios.

These conditions—of cel animation as a homogeneous world, and of a relative homogeneity of traits across cartoons—allowed for a stable appeal of plasmaticness, a set of rules that made it possible to recognize cartoon characters as breaking our rules. Neither audiences nor astute critics nor animators had to make a new rulebook from scratch with every new cartoon. The technical-support automatisms of line drawings were used in significant ways to create convention automatisms of gags, anthropomorphic animals, image-sound relations that blurred diegetic sound with incidental music, and so on, allowing a spectator to partake in the pleasures of an animated world projection. In other words, although the cartoon often acted as if anything was possible in its world, there were loosely-constructed heuristic rules as to what they could and could not do. It was the presence of these rules that made it possible to speak of an “animated *world*” at all, in a way conveniently symmetrical to the world of feature films.

⁷⁶ Eisenstein gives particular significance to the fact that cartoons are built out of *drawn* lines. The animacy of movement in a cartoon character is already latent in the line.

4. From cartoons to animation

By the time of Cavell's own writing, as evidenced by AMPAS's rule change, the world of the cartoon had started to come apart. Neither the discipline of drawing nor the fairytale or comic anthropomorphisms of its characters were necessary. Of course, this had always been known of frame-by-frame manipulation as a technique in itself. But by the 1960s it became significant, unavoidable; the delimitations of cartoons no longer made sense as the standard for what animators were doing.

Moreover, the typical traits of cartoons were often cast as banal and constricting. Critic André Martin wrote an article for *Sight and Sound* in 1959 (coincident with the efforts that would become ASIFA) on the current state and future possibilities of international animation, covering examples from over a dozen countries. Martin argues that the chief obstacle to animation's acceptance as an art is the "enormous commercial success and correspondingly widespread influence" of the American studio cartoon style, as a result of which, "the animated film still probably signifies one thing only [to many filmgoers throughout the world]: the Hollywood cartoon; more specifically, Walt Disney; more specifically still, Mickey Mouse."⁷⁷ In defiance of the Disney model, Martin triumphantly declares that a "new era now opening up for animated cinema is going to be marked by *the widest possible range of techniques and process*."⁷⁸ These new processes were being wrought not by changes in large commercial studios but by small groups and one-man enterprises—a search for dozens of personalized styles

⁷⁷ André Martin, "Animated Cinema: The Way Forward," *Sight and Sound*, 28.2 (1959), 80. For a similar set of arguments, see Richard Williams, "Animation and *The Little Island*," *Sight and Sound* 27.6 (1958), 309-311.

⁷⁸ Martin, 84, emphasis added.

that would, according to Martin, reclaim the originary spirit of pioneers Emile Cohl and Winsor McCay. The term *animation*, deliberately chosen over the older term *cartoon*, was not merely descriptive, but indicative of a new standard: stylistic originality.

The invocation of Cohl and McCay indicated what Raymond Durgnat later came to call a “cartoon renaissance,” a reawakening of a long-dormant spirit.⁷⁹ But with that renewal came an implicit problem of defining animation as closer to something we might call a series of automatic *technique* projections. The illusion of movement was still paramount, but in a different way, as a basis for exploring the sheer number of ways in which things could be made to move. The promise of freedom and possibility that had once belonged to a *character*, who could control his body in an unlimited number of ways was transferred to the *artist*, who could rely on an unlimited number of resources to create animated art. Instead of a single studio cartoon on a feature film program, American audiences in the 1960s and 1970s could see ASIFA’s *Tournée of Animation*, an annual selection of shorts (primarily taken from animation festivals) where styles would collide from short to short, in an exhibition strategy modeled on the 16mm distribution of arthouse movies to film societies. Similarly, a program of children’s animation projects from the Yellow Ball Workshop found release through Jonas Mekas’s Filmmakers Cooperative, distributor of the avant-garde work of Stan Brakhage and Hollis Frampton. In a 1967 *Village Voice* column, Mekas praised the children’s projects as the most interesting work being done in animation.⁸⁰

⁷⁹ See Raymond Durgnat, “Borowczyk and the Cartoon Renaissance,” *Film Comment* 12.1 (January/February 1976), 37-44. The title is a pun on one of the films Durgnat analyzes, Walerian Borowczyk’s *Renaissance* (1964).

⁸⁰ See Jonas Mekas, “Movie Journal,” *Village Voice* 12.40 (27 July, 1967), 17, 19. Mekas registers at the same time an impatience with ASIFA animation. But the terms of Mekas’s judgment take seriously the challenging new possibilities of animation working in new materials for new effects, which place him in line with this widespread reevaluation; he merely says that the children do it better than the adults do.

The new polymorphousness of styles is most readily visible in the feature film largely credited with reviving (however briefly) popular interest in animation: George Dunning's *Yellow Submarine* (1968).⁸¹ In its self-conscious assessment of the animator's options before the spectator's eyes, the film makes sensually apparent a dwindling reliance on cartoon plasmaticness and a growing emphasis on technical diversity and visual novelty. The film earned enormous commercial success and glowing critical praise for its exuberant cleverness as, e.g., "a funny, fascinating, whiz-bang, untiringly inventive tour de force through everything that has mattered and glittered in the op art, pop art, art nouveau, way out, way in, cool, hard-edge, psychedelic, poster-style, mixed media world of graphics and design over the last decade or so. It is also a glossary of animation techniques, including some perfected just for this film."⁸²

Although characters transform and transmogrify throughout the film, their flatness makes the alterations look more like the gestalt switch of an artist's strokes than like protoplasmic concentrations of will. Particularly striking is the film's rendition of "Eleanor Rigby." The film's titular submarine sails across the drab cityscape of Liverpool, where various anonymous figures perform repetitive activities in the foreground. The figures are not line drawings but animations of newsprint photographs. In contrast to the Disney and Warner characters whose bodies never get in the way (where the medium of drawing gives rise to its own autonomous world), the whole point of "Eleanor Rigby"'s animation, shown through the figures' newsprint

⁸¹ See e.g., Maltin, 346-347, and Charles Solomon, *Enchanted Drawings: The History of Animation* (New York: Alfred A. Knopf, 1989), 259-260. Animator Richard Williams reinforces the historical importance of *Yellow Submarine* in an interesting way, as confirming for him the superiority of Disney animation. He noticed that after thirty minutes, the film no longer held the audience's attention, and concluded that the *only* way animation could hold an audience's attention for a sustained period of time was through the personality animation and storytelling Disney had perfected. See Williams, *The Animator's Survival Kit* (London and New York: Faber and Faber, 2001), 3-5.

⁸² Charles Champlin, "Beatles and Blue Meanies," *Los Angeles Times* (10 November, 1968), Los Angeles Times West 30.

texture, is that these figures can't move: they are all surface. Their movements are deliberately choppy and rigid. They don't look like moving people but like moving photographs. What's appealing in these figures is not any freedom of movement they display (they resemble automatons, in keeping with the song's subject matter of trapped souls), but the fact that such a crude switching of poses looks like it's movement at all.

Even the erratically-produced shorts of Disney partook of the novelty. *A Symposium on Popular Songs* (Bill Justice, 1962) provides a display of colliding techniques more extreme than *Yellow Submarine*: a series of songs in different musical genres (ragtime, country, etc.) whose differences are reflected in the visual style that animates each song. While a conventional-looking cartoon duck introduces each song to loosely motivate it, the variety of styles is clearly the main attraction. Every song, in fact, is presented in a radically different design, with multiple materials being used: paper cutouts, bits of string, and even vegetables are animated. No song looks like it belongs in the same universe as any other song. The short is an anthology of techniques, a virtuosic display of what animation can do beyond cartoons.⁸³

Contrary to his critics, Cavell *is* able to give as satisfactory a theory of cartoons as those that have been typically accepted as satisfactory theories of cartoons; his realism does not pose a problem for them. His notion of automatisms, as historically-specific relations of practice to a material basis, allows for a place for automatic *and* animated world projections; as he puts it, “natural is no more than natural, and may change with historical or cultural change,” meaning that whatever counts as “natural” in art goes through a process of naturalization.⁸⁴ And yet, there

⁸³ Two other Disney shorts of this period are worth mentioning in this regard. *Noah's Ark* (Bill Justice, 1959) is entirely made with puppet animation; *It's Tough to Be a Bird* (Ward Kimball, 1969) concludes with a speedy collage of cutouts.

⁸⁴ WV 171.

is more at stake in the world of animation than merely noting that it has changed. Asking if *Yellow Submarine* or *A Symposium on Popular Songs* is a “world” is less like asking whether a painting is a world than like asking whether a photomontage is a world. They seem *worldlike* enough; there are parts we recognize from a world; but it’s unclear what to do with these parts, what consistent relation they may betray. By the emphases of these examples on technical procedures over plasticity, it is unclear what, if any, application that Cavell’s theory of cartoons may have to them. His theory is plagued not by inaccurate statements but by historical paradoxes. The examples, and animation as it had generally come to be embraced, demand a different kind of description of their automatisms.

5. Animation and automatism

This large-scale shift in what animation is considered to be bears a number of interesting similarities with Cavell’s picture of artistic modernism. There is the separation of an artform, as per its artists and its critics, from the authority of its assumed audience (most people think of animation as Mickey Mouse, and most people, through no fault of their own, don’t know what they’re talking about).⁸⁵ There is the shift in the view of artistic rules from tradition to cliché. Finally, there is the desire to uphold an art through radically changing it. Cavell writes of the modernist situation (specifically about music but intended to capture the problem more generally):

⁸⁵ This, it should be noted, is not the same as an antagonistic refusal of a popular audience. The question of audience for non-cartoon animation is a complex one, and will be addressed in chapter 4.

Nothing we now have to say, no personal utterance, has its meaning conveyed in the conventions and formulas we now share. In a time of slogans, sponsored messages, ideologies, psychological warfare, mass projects, where words have lost touch with their sources or objects, and in a phonographic culture where music is for dreaming, or for kissing, or for taking a shower, or for having your teeth drilled, our choices seem to be those of silence, or nihilism (the denial of the value of shared meaning altogether), or statements so personal as to form the possibility of communication without the support of convention—perhaps to become the source of new convention.⁸⁶

The historical problem of modernism in art, as Cavell understands it, is that once an art no longer takes a set of rules previously held as foundational to be foundational, the art is set adrift. What had once been a naturally-assured relation of an artwork to its art and to its audience (which, for Cavell's Wittgensteinian philosophy, is tantamount to its relation to the world as such) must now be earned on a case-by-case basis. "Statements so personal as to form the possibility of communication without the support of convention," in the aesthetic realm, become the automatisms of modernist art: stylistic experimentations that by definition distinguish artists from each other. In the case of painting, this change is felt in the nonrepresentational work of Kenneth Noland, Morris Louis, and Jules Olitski, imitating "not the *look* of nature, but its conditions, the possibilities of knowing nature at all and of locating ourselves in a world."⁸⁷ Its abstractions *bypass* representation to confront us directly, placing itself in a direct relation to whoever views it.

One of the major themes in *The World Viewed* is that cinema, for Cavell, has come to find itself in a similar situation of modernist doubt—but, being a different art, cinema must find

⁸⁶ Cavell, "Music Discomposed," 201-202.

⁸⁷ WV 113, original emphasis. What he means is that the works of Pollock, Louis, Noland, and Olitski (all card-carrying members of Michael Fried's modernist canon) can force a spectator to return to his place in the world through their ability to confront the spectator as fully autonomous examples of painting (which manage to achieve beauty using only a limited set of formal variables to explore the conditions of the art of painting).

Note that, in the Kantian aesthetic sense, these works are thought to discover something *like* rules but which cannot be generalizable *as* rules. This is an important way in which what holds modernist painting together differs from animation.

its own unique way back to the world. Asserting that the heroic myths of genre and the singular appeals of movie stars no longer seem to hold,⁸⁸ Cavell argues that movies must find new means of significance: “the camera must now, in candor, acknowledge not its being present in the world but in being outside its world.”⁸⁹ He explores these acknowledgments as possibly forging new relations to their world through self-conscious techniques like slow-motion or freeze frames, continue faith in the old assurances of the movies.⁹⁰ In all of Cavell’s cases for movies, “[t]he camera has to be somewhere,” so to speak.⁹¹

In the case of the new animation, the matter is different still. There is, for all intents and purposes, no canvas and no camera. The embrace of new techniques, and the assertion of animation as an art able to embrace an unlimited number of techniques, constituted a renewal of the wonder of the discovery of the impression of movement. What becomes unavoidable is the automatic assurance that any figure, regardless of its makings, if subjected to certain frame-by-frame configurations of distance and timing, will look like it moves. The impression, moreover,

⁸⁸ See WV 60-67. Cavell feels compelled to attribute this “death of the myths” to changes broader and deeper than the internal aesthetic development of cinema as an art, but his only hints of an answer come from a general sense of postwar disillusionment. It is unclear to me whether or not Cavell’s picture of modernist art (or of modern philosophy, for that matter) is able to avoid the trap of psychologizing either a given artist or thinker, or a whole spirit of an age.

⁸⁹ WV 130.

⁹⁰ Over a long set of critical examples, Cavell seeks to prove that in certain cases a freeze-frame will count as an acknowledgment (e.g., *Jules and Jim* (Francois Truffaut, 1962), and in other cases it will only count as self-reference (e.g., *Darling* (John Schlesinger, 1965); see WV 137-142. Self-reference is, for Cavell, the single largest danger looming over the integrity of the movies. It is a problem of empty novelty, part of a theme Cavell threads throughout the book of irresponsible “modernizers” (who seek to upend conventions just because they can) against moral “modernists” (who seek new ways to keep alive the hope of convention’s binding powers against the modernizers). See, e.g., “The modernist is incomprehensible apart from his questioning of specific traditions, the traditions that have produced him. The modernizer is merely blind to the power of tradition, mocking his chains.” (WV 15)

⁹¹ WV 143. The point is not literally that one has to put a camera somewhere to film something, but that, in a manner analogous to ordinary language philosophy, a technique must declare its relation to something; otherwise it remains an inert and empty declaration of technique, akin to the statement “I am speaking.” See WV 128-129.

holds *independently* of a world around it. As Cavell himself notes, optical illusions need no reality around them to work their effects.⁹²

We can call this assurance *animated automatism*. In animated automatism, the “material” basis of animation is acknowledged as the visual impression of animated motion. This is *like* the automatism of the camera in that it occurs, strictly speaking, without human intervention: the specifics of the art happen, as it were, on their own. It is *unlike* the automatism of the camera in that it occurs not in a mechanical instrument, but inside the viewer. The impression of animated motion is guaranteed by the way that vision works. Its impact is to reveal certain conditions of locating ourselves in the world (as some modernist painting might be said to do). But the impact comes by way of an automatic process of vision: what is acknowledged is the fact that configurations of distance and timing will *always* produce an illusion of movement. The fact is not unavoidable in a normative or aesthetic sense but in a *biological* sense.

This means that the terms of acknowledgment, in relation to automatism, shift. For Cavell, to deny the pressure of reality on the art of film is tantamount to denying the acknowledgment of reality itself as a problem.⁹³ When what is to be acknowledged is the fact of an illusion, the terms of the acknowledgment change. A spectator is not so much confronted

⁹² Cavell makes this remark in relation to Wittgenstein’s concept of “aspect seeing.” Photographs of faces are said to be different from optical illusions because they seem to force a world around them in order to make sense of them: “[S]hown (a photograph of) a human face, I might, as in the case with the duck-rabbit, be struck right off with one of its possible aspects. This is unlike the case of the triangle, in which, to read it as ‘fallen over,’ I have to imagine something in connection with it, surround it with a fiction. But like the triangle and unlike the duck-rabbit, I *can* surround the face with a fiction in order to alter its aspects. And *unlike the triangle and the duck-rabbit and all other optical illusions, I must surround the face with a reality*—as though the seeing of a reality is the imagining of it...” (WV 158, emphasis added)

⁹³ Cavell attributes the contemporary desire to “resist the pressure of reality upon art” partly to “a more or less vague and pervasive intellectual fashion, apparently sanctioned by the history of epistemology and the rise of modern science, according to which we never really, and never really can, see reality as it is...” He quickly dismisses this desire “if for no other reason [than that] a general dismissal of reality depends upon theories (of knowledge, of science, of art, of reality, of realism) whose power to convince is hardly greater than reality’s own.” (WV 165)

with an acknowledgment as *forced* into one. To deny that animation is an illusion (in a scientifically-defined sense of an optical illusion), one would either have to assert that real physical things are moving on a screen or define the term “illusion” in such a way that it goes beyond gaming the senses. In the first case, one not only misses the point or the art of animation (since the source of wonder is in the fact that what we see moving *shouldn't* be moving) but courts insanity. In the second case, one would concede the accuracy of the scientific description and find other grounds for dispute; the terms of the conversation would be changed to evade the claim that the impression is making on the body.⁹⁴ Accepting the animation as art is parasitic upon an acceptance of its instrumental basis as the automatically-assured impression of movement.

What this means for Cavell's theory is that any attachment that animation can have to the world becomes dependent on a mediating term (i.e., the science of vision). Its wonder comes equipped with an accompanying explanation. Cartoons had made the explanation irrelevant by locating their appeals in the freedom of characters in a world, characters who happened to exist in the realm of drawing and knew how to use that to their advantage. Animation, obsessed with calling attention to the mechanics of the illusion, keeps troubling the possibility of a world. The Romanticism that Cavell values in the spirit of cartoons, film, art, and philosophy, as the promise of a reforged bond with the world (no longer able to be assumed in modernity) dissolves in a sea of styles.

⁹⁴ This is the route typically taken by ordinary language philosophy, in, e.g., J.L. Austin, *Sense and Sensibilia* (New York: Oxford University Press, 1962). Austin's effort is to define “illusion” in a particular way as to imply deception, leaving aside the mechanics of the explanation. He does not deny that twenty-four frames per second with a shutter mechanism create the appearance of movement; he claims, rather, that it is illegitimate to call the phenomenon a proper illusion.

6. Conclusion

Cavell's film theory emerges at the intersection of two problems: the problem in the burgeoning discipline of film studies of how to define its object of study, and the problem within animation of how to legitimate itself as an art. Cavell's method of defining film as an object, part and parcel with its claims to legitimacy, was roundly rejected by film scholars for having too narrow a definition, best exemplified by the animation counterexample. Yet throughout film studies the counterexample is, by and large, not taken up as an occasion for further study; animation is only discussed as the most obvious piece of evidence against the theory. The interest in animation does not rest upon any particular power, aesthetic or otherwise, of frame-by-frame manipulation, only on its bare possibility. Hence, animation ironically loses its specificity in the face of the academicization of film studies. It becomes detached from a sense of its own history.

Cavell's notion of an art as defined by its automatisms gives back this history, by incorporating the highly variable character of artistic practice and criticism. But the automatism that comes to define animation (the bare illusion of movement) precludes the unifying notion of a world that Cavell sees as central to any art. Instead of using new techniques to confirm the depth of animated characters who freely embody their desires in drawn space, animation staggers strange new sights vertiginously atop each other. A piece of animation cannot be criticized on

the grounds that it does not create a world; rather, through the illusions of animation, the very notion of a world is made unnecessary.⁹⁵

Animated automatism, then, as I have defined it, does not merely make the specificity of animation as an art problematic: it turns perception itself into a problematic matter. We know intuitively what animation is. Its medium seems easy to define, as movement on a screen created frame-by-frame, rather than recorded in real time. We find it necessary to define animation in this way because we know, by experience, that a number of different materials and procedures can count as animation. Cartoon drawings, puppets, paper cutouts, and other materials can all give us something that we can unproblematically call “animation,” because all of these materials can be photographed frame-by-frame and altered accordingly so as to appear to move. *Anything* that can be filmed (and even some things that cannot be filmed) can be animated. What counts is 1) that it moves, and 2) that its movement is artificially constructed, rather than recorded. Nothing, it seems, could be simpler.

We know that any materials can count as animation because all of these things, if arranged frame-by-frame in certain ways, can look like they are moving. But how do we know they will *all* look like they move? Do we need to see all possible examples of animation to state this with any certainty? Of course not, because we know how moving pictures work: we know that *all* moving pictures rely on producing the impression of movement by slight differences between frames, with a shutter mechanism, and this will automatically create an impression of movement regardless of what is on the frames. All this is so obvious as to hardly seem to need

⁹⁵ One could use this fact to conclude that once animation stops being cartoons it is no longer art. Animation’s changes *did* in fact raise this possibility in the criticism of Michael Barrier, whose arguments for cartoons and against animation will be discussed in chapter four.

overt elaboration: to know what animation *is* is inseparable from knowing how it works upon the eye.

However, the elaboration here is no less necessary for being implicit, and the elaboration creates a specific problem for defining animation that does not necessarily hold for other artistic media. Namely, it is an art of vision that necessarily implies a science of vision. As such, it is beholden to the powers of particular scientific discoveries: to their robustness and to their dissemination.

Chapter Two

Automatism as Testing:

From Albert Michotte to Norman McLaren

1. Introduction

This chapter argues that the mechanics of the impression of animated motion make the practice of animation inextricable from the psychology of perception. Clearly, the illusion of motion is central to animation; yet this fact has been so far taken for granted in studies of animation, with little consideration as to how or why it works. Such matters, it is assumed, are beside the point of animation's specificity as a historically specific product of human culture. In fact, most current accounts of animation, following the plasmatic logic of cartoons, assert the strange and lively nature of animated movement as almost an antiscience: a constellation of vitalist energies, a Bergsonian demonstration of the irreducibility of movement and life to mechanism, an *anima* over and against a *mechanica*.¹

¹ For examples see Suzanne Buchan, *The Quay Brothers: Into a Metaphysical Playroom* (Minneapolis: University of Minnesota Press, 2010), and, in a slightly different register, Bill Schaffer, "Inbetweening: Animation, Deleuze, and Film Theory," in Bruce Bennet, Marc Furstenau, and Adrian MacKenzie, eds., *Cinema and Technology: Cultures, Theories, Practices* (New York: Palgrave MacMillan, 2009), 201-213. Both of these studies rely heavily on Bergson by way of Deleuze to construct a more or less neo-Romantic view of animation practice: an animated character as a new and autonomous form of life. Deleuze's own views on the relations of vitalism to mechanism, and the relation of the sciences to humanist matters, however, are considerably more complex. His statement that movement in cinema is an "immediate given" is easy to take as making a point derived from phenomenology and an endorsement of Bergson's anti-mechanicism, but two major themes of Deleuze's thinking complicate this interpretation. (See Deleuze, *Cinema 1: The Movement-Image*, trans. Hugh Tomlinson and Barbara Hammerjam (Minneapolis: University of Minnesota Press, 1986), 12.) Throughout his career, Deleuze quietly favored empiricism and its emphasis on non-totalizing sensations over phenomenology's whole-world orientations. See especially Deleuze, *Pure Immanence: Essays on a Life*, trans. Anne Boyman (New York: Zone Books, 2001). Additionally, Deleuze makes frequent incorporations of biology into his philosophy. His insistence (with Bergson) that cinematic motion is not *reducible to* mechanism does not necessarily mean that it is *fully autonomous from*

My purpose here is not to devalue these descriptions of animation but to dwell upon the leap in thinking that is so often done here: we take the mechanics of the impression for granted in order to assert the impression's irreducibility to mechanics. An odd aporia is at work in this move. To analyze animation, one must get beyond the mere impression of movement (lest one be describing mere science); yet animation makes its art *out of* the illusion of movement, constantly calling attention to it. Without the illusion of motion asserting itself automatically, there would be no animation; yet few examples of film have been asserted as *less* automatic and more spirited than animation. If animation is not reducible to brute matters of mechanics, it is not entirely free of them either.

To illustrate the thorniness of this issue, I want to present a strange coincidence between two crucial figures in film history: Canadian animator Norman McLaren and Belgian psychologist Albert Michotte. These two figures have both suffered from a curious neglect in the history of animation and film theory, respectively, and are worth examining in their own right. McLaren's adage that "animation is not the art of drawings that move but the art of movements that are drawn" has become something of a mantra in animation studies, but at the expense of the specificities of his practice.² Michotte's 1948 paper on the impression of reality in the cinema has quietly and indirectly become a foundational text for a wide-ranging return to phenomenological issues of cinematic realism—but with no sense of how Michotte himself came

mechanism. See especially Deleuze, *Spinoza: Practical Philosophy*, trans. Robert Hurley (San Francisco: City Lights Books, 1988), 122-130; *Foucault*, trans. Sean Hand (Minneapolis: University of Minnesota Press, 1988), 129-132; and Gilles Deleuze and Félix Guattari, *What is Philosophy?*, trans. Hugh Tomlinson and Graham Burchell (New York: Columbia University Press, 1994), 200-218.

² See, e.g., George Sifianos, "The Definition of Animation: A Letter from Norman McLaren," *Animation Journal* 3.2 (Spring 1995), 62-66; Charles Solomon, "Animation: Notes on a Definition," in Charles Solomon, ed., *The Art of the Animated Image: An Anthology* (Los Angeles: AFI, 1987), 11; Maureen Furniss, *Art in Motion: Animation Aesthetics* (Eastleigh, UK: John Libbey, 1998), 5; and Paul Wells, *Understanding Animation* (New York and London: Routledge, 1999), 10.

to the arguments in that paper, or the arguments' origins in his experiments.³ However, these two historical figures become even more interesting for the unexpected way they overlap.

In 1976, McLaren made, with Grant Munro, an instructional series called *Animated Motion*, for training young animators at the National Film Board of Canada in using the animation stand and in thinking about visual movement like an animator (focusing on the relations between successive frames and not on individual compositions). Part three of the series presents variations of paper circles hitting each other. McLaren demonstrates that when an animator manipulates the number of frames it takes for one circle to hit another and what each circle does after the impact, the animator can suggest different kinds of movement: a punch, a gentle push, a cautious touch. Each movement is illustrated with tick-marks underneath to stake out the frame-by-frame positions of the impacting circle, proving that what appears seamless and spontaneous is nothing but precisely-measured distances.

Long before this series, in the early-to-mid-1940s, Michotte conducted a series of experiments at his laboratory in Louvain, France, with impressions of moving squares hitting each other through holes in a paper disc. Michotte found that mathematical manipulations of

³ See Michotte, "The Character of 'Reality' of Cinematographic Projections," collected in Alan Costall, George Butterworth, and Georges Thines, eds., *Albert Michotte's Experimental Phenomenology of Perception* (hereafter EPP), Hillsdale, NJ: Lawrence Erlbaum Associates, 1991), 197-208. Michotte's thesis (partly following Max Wertheimer on ϕ -movement) that stroboscopic visual movement is always perceived as real is a key foundational point of Christian Metz's essay, "On the Impression of Reality in the Cinema," in *Film Language: A Semiotics of the Cinema*, trans. Michael Taylor (New York: Oxford University Press, 1974), 3-15. Metz's essay has enjoyed a considerable surge in attention, due to recent efforts to redefine cinematic realism phenomenologically, (a matter of immediate experience rather than knowledge or belief in the way that the camera works), as an alternative to previously-held indexical accounts of realism. See Tom Gunning, "Moving Away from the Index: Cinema and the Impression of Reality," *differences* 18.1 (2007), 29-52; Gertrud Koch, "Carnivore or Chameleon: The Fate of Cinema Studies," *Critical Inquiry* 35.4 (Summer 2009), 918-928; and Francesco Cassetti, "Sutured Reality: Film, from Photographic to Digital," *October* 138 (Fall 2011), 95-106. All three of these recent essays overtly deal with animation as a specific conceptual problem for film.

Interestingly, cognitive film theorist Ed Tan antedates all of these uses of Metz (via Michotte), in a similar psychologically-grounded theory of realism. See Tan, *Emotion and the Structure of Narrative Film: Film as an Emotion Machine*, trans. Barbara Fasting (Hillsdale, NJ: Lawrence Erlbaum Associates, 1995), 237.

distance and timing yielded qualitatively different impressions. The higher the speed of impact, the more violent the impression. If Michotte introduced a short lag time between the impact and the second square sending off, the result looked like something mysterious had been triggered inside the square. With a longer lag time, the movement of the first and second squares looked totally unrelated.

McLaren and Michotte have hit upon almost exactly the same means to make almost exactly the same point: that the perception of force relations between two objects is a function of distance and timing, and that this can be proven by abstracting the movement as an independent variable. We can view both works interchangeably, as either short animated films or psychological experiments; in fact the *only* significant difference between the two is context. How and why did such a similarity come about?

That question forms the impetus for this chapter's investigation into the echoing histories of Gestalt psychology and McLaren's figurative animation. In pitching the question at the level of history, I additionally argue that a new perspective can be gained on the current methodological anxieties in film studies between "scientific" and "humanistic" study. As D.N. Rodowick has noted, the recent crisis in the *object* of study in film studies has been accompanied by a crisis in *how* to properly study that object. Rodowick argues that much of the metatheoretical debate in film is tied to an effort to distinguish the sciences from the humanities, addressing such difficult questions as: Do models of scientific inquiry, grounded in testing hypotheses through rigorous empirical testing, yield proper insight into film? Does film's status as a cultural object make naturalistic methods of study useless? To what extent might film and culture be considered "natural objects" appropriate for scientific study? For that matter, to what

extent might *science* be considered a natural object (i.e., a way of building knowledge whose authority is “natural”)?⁴

These questions have driven some of the most interesting film theory of the past dozen-plus years, but they remain all but impossible to answer at such a broad categorical level. The mixed histories of animation and the study of perception offer a unique opportunity to delve into the trenches of these problems. The chapter will proceed by laying out the respective histories of Albert Michotte and Norman McLaren, detailing Michotte’s debts to the Gestalt psychology movement and McLaren’s seminal place in noncartoon animation. The histories will dovetail into a picture of modern perception that made both Michotte’s work and McLaren’s animation possible.

In the process, I will reach a counterintuitive conclusion about animation itself: that the artform, as we currently define it, shares protocols with a certain method of perceptual experimentation, as developed by Gestalt psychology. The two share what Ian Hacking calls “styles of reasoning,” a set of procedures that creates its own standards of correctness.⁵

Figurative animation seeks out perceptual regularities by abstracting structures of movement, and its art, to a considerable extent, relies on “scientific” regularities of perception. Exploiting these regularities has been a key part of animation’s own history. Not only is McLaren important for being an exemplary animator, his work is representative of animation’s fascination with experimentation more generally. Such experimentation is not a blind search for new effects in

⁴ See D.N. Rodowick, “An Elegy for Theory,” *October* 122 (Fall 2007), 95-103.

⁵ See Ian Hacking, “Styles of Scientific Reasoning,” in John Rajchman and Cornell West, eds., *Post-Analytic Philosophy* (New York: Columbia University Press, 1985), 145-165, and “‘Style’ for Historians and Philosophers,” collected in *Historical Ontology* (Cambridge: Harvard University Press, 2002), 178-199.

the apparatus, but is often undergirded by an abiding concern with what *counts* as intuitively “correct” visual motion.

Consequently, the conclusions of this chapter problematize the extent to which a piece of animation may be said to *resist* protocols of rationalization or instrumentation of the human sensorium. However, the chapter is not a straightforward argument for subsuming animation to the study of cognitive film theory; indeed, part of what makes the overlap fascinating is that it concerns now-outdated Gestalt psychology. Nor does the chapter tell a story of animation’s technologized art as nothing more than reductions of its viewers to bundles of sensory measurements. Rather, the overlap opens up a problematic in which we can view anew the current crisis over what relevance scientific advancements have (if any) to film, and to art more generally. The two terms are constantly in flux. My study will yield less a way to choose between a hard-line humanities position and a hard-line scientism position than an account of why the current landscape in film study, in some respects, looks the way it does.

Rudolph Arnheim, in *Art and Visual Perception*, cites a famous 1944 experiment by Fritz Heider and Maryann Simmel. In their experiment, test subjects responded to a short sequence of moving paper cutout shapes as if they were intentional agents. Arnheim takes the Heider and Simmel experiment as a key piece of evidence that our perception of living things as social agents is natural; further, he notes the similarity between the “film” in Heider and Simmel’s experiment and “[t]he surprisingly strong expression of geometrical figures in movement [that] has been demonstrated in the more elaborate ‘abstract’ films of Oskar Fischinger, Norman MacLaren [sic], Walt Disney, and others.”⁶ Arnheim’s descriptions apply much more directly to

⁶ Rudolph Arnheim, *Art and Visual Perception: A Psychology of the Creative Eye* (Berkeley: University of California Press, 1954), 389.

McLaren than to Fischinger (who purposely sought out non-recognizable movements); nonetheless, the symmetry between the examples is intended to prove the underlying theory of Gestalt laws in perception. In so demonstrating, Arnheim hopes to convince his reader of a broader symmetry between Gestalt psychology and aesthetics. Yet the logic seems suspiciously recursive: Arnheim takes the animated connotations of McLaren's figures to be justification for Gestalt theory, which was itself based on animations of figures. Does this overlap yield two independent validations of the same phenomenon, like Lavoisier and Priestley discovering oxygen in different laboratories? Or is it a case of believing that one has measured a yardstick by eyeballing it next to another yardstick?⁷

Patrick Power has recently echoed the theoretical thrust of this claim almost exactly, in an effort to update the science behind the idea: "As early as the 1940s, psychologists Heider and Simmel...used animated film to research causality and social perception, and demonstrated that we have a strong tendency to infer human causal characteristics, for example goals, from the motion of inanimate objects." See Power, "Character Animation and the Embodied Mind-Brain," *animation: an interdisciplinary journal* 3.1 (2008), 27-28.

Power finds a methodological echo in a Mar and Macrae experiment that analyzed fMRI scans of test subjects watching live-action footage from Richard Linklater's rotoscoped film *Waking Life* (2001) in comparison to the animated footage. It should be noted, however, that while both experiments used moving images, the difference in experimental protocol here is enormous. Gestalt psychology experiments rely on immediate responses from test subjects and taking that data as their given; fMRI is intended to measure phenomena that cannot be reported by the subject (indeed much of the point of fMRI is to measure activity of which the subject himself or herself is unaware). The usefulness of fMRI scans remains a vexed and open question in the philosophy of science. See the extended set of debates in *Cortex*, 42.3 (2006).

⁷ I should note that a further common point of reference for film-and-animation associations is the work of Gestalt psychologist Gunnar Johansson, who tested subjects' reactions to point-light displays to gauge the organizational features of the perceptions of intentional agents. See Johansson, "Visual Perception of Biological Motion and a Model for Its Analysis," *Perception and Psychophysics* 14.2 (1973), 201-211.

At this point it should be obvious that this chapter is not intended to give an exhaustive up-to-date theory of the perception of animated motion. Such a theory would likely incorporate the experimental work of each psychologist already mentioned, with additional considerations from folk physics and folk biology.

2. Albert Michotte and the Gestalt psychology program

Albert Michotte's experiments in causality punctuated a career spent working under changing research programs in psychology over the early twentieth century. Through a meeting with Oswald Külpe in 1906, Michotte was encouraged to study high-level mental processes that had been believed to be beyond the reach of experimental psychology's founder, Wilhelm Wundt, and Michotte performed experiments on memory and voluntary choice under a model of introspectionism.⁸ After the First World War, when systematic introspection fell out of fashion, Michotte took to studying the more directly-measurable domains of perception and motor performance. Towards the end of his career, Michotte noted that these studies "yielded results and conclusions entirely analogous to those fundamental to Gestalt psychology."⁹ While he claims to have flirted with behaviorism and its emphasis on task performance in its heyday, he insists that his practices were more closely aligned to Gestalt psychology the entire time. His 1940s work on the impression causality was the culmination of these interests.¹⁰

⁸ For more on Külpe and the introspectionist project in relation to earlier experimental psychology, see E.G. Boring, *A History of Experimental Psychology* (New York: Appleton-Century-Crofts, 1950), 386-401.

⁹ Michotte, "Autobiography of Professor Albert Michotte van den Berck," EPP 33.

¹⁰ Michotte notes ambivalently his participation in "behaviorist" experiments: "[My views on the importance of meaning] prevented me from supporting an extreme form of behaviorism. I had become convinced that psychology was not a science of mental life but rather a science of behavior or action. It also appeared obvious that a thorough study of behavior must take into account the way in which people and animals 'understand' the situation in which they are placed and the actions of other people and animals, as well as those they perform themselves." See EEP 34.

He attributes to behaviorism his 1924 work on motor reactions, wherein he used kinesiograms (Etienne-Jules Marey's long-exposure photographs that record points of movement-traces) to study the effects of training on simple motor tasks. He insists that even his "behaviorist" research confirmed the Gestalt picture, on the grounds that the experiments resulted in trained movements that were integrated into a unitary functional whole, obeying Gestalt properties like those found in visual figures and musical figures.

Gestalt psychology was equal parts research program (with its characteristic protocols of experimentation), social-scientific movement, and philosophy of experience, with those features not always being easily separable.¹¹ The movement was founded by Max Wertheimer, Kurt Koffka, and Wolfgang Köhler in Berlin, largely based around the results of Wertheimer's famous paper on apparent movement. Roughly put, the movement is built on the conviction that in matters of perception (and human activity more generally), structural configurations take precedence over individual elements. What we perceive at the most basic level, according to a Gestaltist, is not a bundle of stimuli that we cognitively construct piece by piece into a picture of reality.¹² Rather, we see figures segregated from grounds,¹³ whole shapes that tend toward simplicity and symmetry. This basic "seeing," moreover, is said to not take place as a result of hierarchically-organized internal processes but at the level of perception itself. Gestalt research

¹¹ Hence I will sometimes refer to Gestalt psychology as a "picture" (in the theoretical sense of an interconnected set of salient features and assumptions), sometimes as a "movement" (in the quasi-political sense of a polemic in competition with other scientists or philosophers), and sometimes as a "research program" or methodology (in the sense of a self-sustaining "style" of procedures), depending on the context. For my purposes, the question of methodology is primary. It is in *this* manner that Gestalt psychology displays such prominent resemblances to animation practice. For more on the social history of Gestalt psychology, see Mitchell G. Ash, *Gestalt Psychology in German Culture, 1890-1967: Holism and the Quest for Objectivity* (Cambridge: Cambridge University Press, 1995).

¹² This view with which the Gestalt picture contrasts may be called more generally, following Margaret Wilson, the "veil of perception" hypothesis that originates in modern philosophy (most emblematically in Descartes) and is scientifically operationalized in such figures as Helmholtz. The position, coarsely stated, is that we do not receive the outside world directly through our senses, but that the world reaches our thoughts through unseen mediators. According to Wilson, this position arises from a natural tension between a faith in the integrity of the physical world as given by the mechanistic sciences and the idea that there is something unphysically mysterious about the givenness of ordinary experience. See Wilson, "Skepticism without Indubitability," in *Ideas and Mechanism: Essays on Early Modern Philosophy* (Princeton: Princeton University Press, 1999), 3-9.

¹³ See Koffka, *Principles of Gestalt Psychology* (New York: Harcourt, Brace and World, 1935), 177-210. A figure stands out from the ground and is, by nature, more distinct than the ground upon which it rests. It is, for a Gestaltist, literally impossible to see a figure without a ground.

is characterized by the search for generalizable *laws of perception*, such as the figure-ground rule, or the law of “Prägnanz.”¹⁴

Theoretically, Gestaltists tended to hold the position that their laws of perception were not the result of learning but were ingrained structural features of the human sensorium. Methodologically, the movement was marked by a near-obsessive study of optical illusions and structurally ambiguous figures. The Gestalt program was hardly the first to discover such sensory tricks: the duck-rabbit, the illusion of equally-sized figures in perspective, and the Müller-Lyer illusion all precede it. But the Gestalt picture of vision relied heavily upon an ability to closely describe what psychologically happens when such pictures alter before our eyes without anything altering *within* them—when a ruler makes the Müller-Lyer lines equivalent, or when the duck transforms into a rabbit. Rubin’s two-faced vase and vacillating Maltese cross, easily-demonstrable variations in color gradients, and other phenomena played a crucial part in the Gestalt program’s redescription of perceptual illusion. For a Gestaltist, such “illusions” are not mistaken judgments or inferences but immediate perceptual givens: for example, Max Wertheimer forcefully asserts of his phi-movement (ϕ) that “there is no illusion of judgment here, no conclusion, but a living seeing of motion.”¹⁵ The error of apparent motion, under the Gestalt description, is an abstraction of what always happens anyway on the surface of perception.

¹⁴ Prägnanz is a law of parsimony that characteristically eliminates alternative means to seeing an ambiguous form. If there is more than one way to see a form, we tend to see it in one way which preserves balance, symmetry, and continuity. Michotte appeals partially to Prägnanz in his discussion of perspective in simple geometric drawings, a discussion which leads him to the complicated matter of “phenomenal reality” that would play a crucial role in his film theory. See Michotte, “The Psychological Enigma of Perspective in Outline Pictures,” EPP 174-187.

¹⁵ Max Wertheimer, “Experimental Studies on the Seeing of Motion,” collected in Thorne Shipley, trans. and ed., *Classics in Psychology* (New York: Philosophical Library, 1961), 1066.

As an alternative to the atomism prevalent in traditional psychology,¹⁶ Gestalt psychology offered an ideal of holism in human activity that was believed by some of its adherents to mend the modern individual's relation to his world—a curative for the perceived rational reduction of the human animal to a mechanism. Köhler, the movement's chief theoretical spokesman, used Gestalt as a basis for criticizing the insular autonomy of scientific practice itself.¹⁷ Moreover, he advocated an isomorphic relation of Gestalt's laws of perception (e.g., the need for symmetry and simplicity) to the dynamic laws of the physical world (i.e., the structural tendency of a physical system to seek and maintain relative stability).¹⁸ Maurice Merleau-Ponty came to utilize Gestalt as a formative principle to solve problems of philosophical doubt and scientific reductionism. Gestaltists' experiments, descriptions of illusions, and theoretical refutations of various classical concepts of psychology, played an enormous role in laying the groundwork for Merleau-Ponty's existential phenomenology.¹⁹

¹⁶ Arnheim gives his summary of the movement as follows: "[Gestalt psychology] came about, negatively, as a protest against what is now called the atomistic approach: the method of explaining things by adding up local effects, qualities, and functions of isolated elements." See "Gestalt and Art," *Journal of Aesthetics and Art Criticism* 2.8 (Autumn 1943), 71.

¹⁷ Köhler accuses positivism of the same charges of artificially isolating its objects of study in the same way that atomistic psychology isolates sensations from the perceptual field as a whole. To this he attributes the widespread popular suspicion of science, and pleads for a scientific wrestling with ostensibly non-scientific values and politics. See Köhler, *The Place of Value in a World of Facts* (New York: Liveright Publishing, 1938).

¹⁸ See *The Task of Gestalt Psychology*, 58-93. Köhler also argued for an isomorphism between the psychological and the physiological components of perception. This hypothesis, subsequently discredited, is thought to have contributed to the decline of Gestalt psychology coincident with the cognitive revolution of the 1960s. See Stephen E. Palmer, "Foreword: The Legacy of Irvin Rock," in Irvin Rock, *Indirect Perception* (Cambridge: MIT Press, 1996), xv-xvi.

¹⁹ Maurice Merleau-Ponty copies Gestalt psychology's criticisms of various doctrines of traditional psychology regarding the ideas of sensation, association, memory, judgment, and attention, nearly verbatim. See *Phenomenology of Perception*, trans. Colin Smith (London and New York: Routledge and Kegan Paul, 1970), 3-63. Insights from Gestalt psychology are also threaded throughout Merleau-Ponty's earlier work. See Merleau-Ponty, *The Structure of Behavior*, trans. Alden L. Fisher (New York: Beacon Press, 1963).

Of course, Merleau-Ponty does not share the ontological picture of Gestalt theory, and offers numerous arguments against its very desires to formulate objective "laws" of perception. This tension is fundamental to the

Gestalt's promise, intimately linked with a Romanticist redescription of humans in the world, yielded a kind of dual pressure upon ideas of science and ideals of aesthetics. Merleau-Ponty notes a predecessor to the Gestalt insight into the primacy of perceptual forms in Kant's demonstration that in aesthetic judgment, "I am aware of a harmony between sensation and concept, between myself and others, which is itself without any concept;"²⁰ the phenomenology of this harmony is invoked throughout *Phenomenology of Perception* in vividly poetic descriptions of first-person experiences.²¹ Graphic designer György Kepes's 1944 art textbook, *Language of Vision*, pleaded for a modernist revaluation of visual art based on a revitalization of the perceptual powers of basic artistic units like lines and color, grounded in the demonstrations

groundwork of Merleau-Ponty's phenomenology: although Merleau-Ponty synthesizes many of the *results* of its research, his philosophy continually resists the idea of a research program. Gestalt theory insisted on the value of scientific laws over and above the vagaries of immediate experience. See Köhler's arguments against hard-line "phenomenalism" (under which Merleau-Ponty would most likely fall) in *The Place of Value in a World of Facts*, 102-141. For Köhler, a programmatic insistence on a *single* world built up only from experience (as Merleau-Ponty would come to do) could not explain the peculiarities of the world of research for the physicist.

²⁰ Merleau-Ponty, *Phenomenology of Perception*, preface, xvii. This manner of pre-conceptual judgment is, for Merleau-Ponty, not a judgment at all but perception in its natural state. In the absolute singularity of aesthetic percept-judgments, Merleau-Ponty finds productive resistance to Kant's intellectualist notion of "judgment" more generally (see 43).

This entails that there is nothing categorically special about perceiving something aesthetically; he cites approvingly Kurt Koffka's remark that "an object looks attractive or repulsive before it looks black or blue, circular or square." See Merleau-Ponty, 24.

²¹ I refer here to his tendency to offer thick descriptions of sensory experiences and his constant use of "I" that puts him at the center of the experience (which pronoun, through its constant usage, also seeks to paradoxically empty the significance of the fact that it is the historical author Maurice Merleau-Ponty making the observations).

I take Merleau-Ponty's prose to be an attempt to re-create what he, in passing, refers to as "common experience," an expressive act which opens up one's individual experience to others, viz.: "Between sense experience and knowing, *common experience* establishes a difference which is not that between the quality and the concept. This rich notion of sense experience is still to be found in Romantic usage, for example in Herder. It points to an experience in which we are given not 'dead' qualities, but active ones." (52, emphasis added.)

of Wertheimer et al.; the book's primary acknowledgment is to the "inspiring ideas and illustrations" of Gestalt psychology.²²

The potential of Gestalt for art-science reciprocity was most closely explored by Arnheim, who saw the projects of Gestalt psychology and artistic creation and criticism as complementarily arriving at the same point of values. For Arnheim, Gestalt laws revealed basic tenets of aesthetics that had been explored for centuries by artists. Arnheim maintained that Gestalt psychology could, for example, explain the striving for "balance" in painting as a specific case of "a basic effort of the organism to assimilate stimuli to its own organization," which is in turn "just one aspect of a universal tendency [toward balance] in nature. From this point of view, pleasure appears as a psychological correlate of balance, not as its cause."²³ Arnheim further held that the presence of Gestalt laws in "neutral" perceptual matters like symmetry implied similar laws for expressive qualities like joy or sadness, yielding a new account of artistic expression based on a "geometry of expressive features" rather than a causal or conventional account.²⁴ An isomorphic Gestalt account, according to Arnheim, accorded much more closely with the intuition that emotional qualities of an artwork reside in the features of the artwork itself (and not in some illusory attribution of emotion through hidden mechanisms).²⁵

Arnheim's insistence on Gestalt psychology as uniquely equipped for the task of explaining aesthetics indicates most clearly the unique appeal of Gestalt psychology in the realm

²² György Kepes, *Language of Vision* (Chicago: P. Theobald, 1944), 4. Kepes's book had a more direct historical influence on American animators after World War II; see chapter four.

²³ Arnheim, 74.

²⁴ Arnheim, 75. These two basic insights of Gestalt theory into art—laws of perceiving objects as such and laws of perceiving expressions or living things—form the scaffolding of Arnheim's major work, *Art and Visual Perception*.

²⁵ See also Carroll Pratt's introduction to Köhler, *The Task of Gestalt Psychology*, 22-28.

of science. For Arnheim, the Gestaltists' insistence on studying whole physiognomies (which had to be differentiated from the bottom up, as it were) was a result of an attitude toward practicing their science more like artistic creation than systematic thinking. As he provocatively puts it: "There are *styles* in science just as in art. The gestalt theory is such a new style of science."²⁶

3. The style of Gestalt psychology

As difficult as it is to define the notion of "style" in art (much less in science), there is an intuitive thrust to the term's use. Philosopher of science Ian Hacking has worked to articulate a concept of scientific *styles* of reasoning. "Styles of reasoning" are Hacking's adaptation of Michel Foucault's notion of discourses, as an alternative to a model of science as driven by "paradigms" (as formulated by Thomas Kuhn).²⁷ A *style* of reasoning is a regular procedure

²⁶ Arnheim, 71, emphasis added.

²⁷ Hacking argues that the notion of "styles of reasoning" comes much closer to Foucault's notion of the *episteme* or discursive formation, found in his early archaeological work; see "Styles of Scientific Reasoning," 149-150. Kuhn, Foucault, and Hacking, all articulate the historical variability of apparently foundational, Kantian *a priori* truths, based on the variability of language. Kuhn argues that concepts like "mass" and "weight" in Newtonian mechanics are learned in tandem with the laws to which they apply; they function not as empirically testable, nor as "analytic" or self-evident truths, but historically-specific *a prioris*: "I do not quite want to call such laws analytic, for experience with nature was essential to their initial formulation. Yet they do have something of the necessity that the label 'analytic' implies. Perhaps 'synthetic *a priori*' comes closer." See Kuhn, "Possible Worlds in History of Science, in James Conant and John Haugeland, eds., *The Road Since Structure* (Chicago: University of Chicago Press, 2000), 71. Kuhn's invocation is explicitly holistic. Very similarly, Foucault argues that *epistemes* are built on an "historical *a priori*." Foucault's notion posits a discursive field that enables statements to have any truth-value or take any effect. See *The Archaeology of Knowledge*, trans. A.M. Sheridan Smith (New York: Pantheon Books, 1972), 126-128. Hacking is deeply interested in the epistemological and political implications of Foucault's historical *a priori*, but finds it necessary to coin "styles of reasoning" to break away from the term's difficulties.

I take Hacking to be divesting himself of two difficulties in Foucault: his refusal to define the term "historical *a priori*" consistently, and his contradictory position on the power of the historical *a priori* itself. On the one hand, it is a chance conglomeration of individual techniques of knowledge-building; on the other hand, it is a

applied to data for the purposes of scientific study. As such it tends to be impersonal in nature, and it has autonomous standards for truth and falsehood. While paradigms (in the strictly Kuhnian sense) seek to explain or incorporate novelties (sometimes flat-out disregarding them),²⁸ a style of reasoning *creates* novelties: new objects of study, new standards of truth and falsehood, new modes of explanation, and so on.²⁹ This approach has three consequences. First: styles of reasoning, although they may be combined, are not necessarily commensurate. (Questions asked from methods of statistical analysis have no bearing on a geometric proof, for instance.) Second: unlike paradigms, styles of reasoning can coexist and accumulate. (Studying vision by computational modeling, for example, does not make obsolete vision experiments on lesioned animals.) Third: once in place, a style of reasoning creates its own authority.³⁰ Like the

holistic binding force to which each branch of knowledge must answer. (For detailed discussions of both of these difficulties, see Beatrice Han, *Foucault's Critical Project: Between the Transcendental and the Historical*, trans. Edward Pile (Stanford: Stanford University Press, 2002), 38-69.) Styles of reasoning, being multiple, overlapping, and non-binding, hold no implications for holism. The term "style," for my purposes, also carries an intuitive applicability to artistic styles, which Hacking makes explicit; see "'Style,'" 189.

²⁸ Or, more properly: doing "normal science" seeks to fold novelties into its existing paradigm, but the very means of normal science inadvertently create novelties that precipitate crises in the paradigm, yielding a new paradigm. About a third of the way into *The Structure of Scientific Revolutions*, Kuhn swaps out the term "novelty" for the term "anomaly." He does not define the term "novelty," but I take him by the term to mean merely a potential anomaly, a phenomenon that may or may not be made to fit into the paradigm. An *anomaly* is a novelty that does not fit into the paradigm.

²⁹ Hacking argues that styles of reasoning introduce new kinds of objects of study, evidence, sentences ("new ways of being a candidate for truth or falsehood"), laws ("or at any rate modalities"), possibilities, classification, and explanation. See Hacking, "'Style,'" 189. Hacking is clearly trying to give a modified version of Kuhn's idea of novelties in the place of paradigms; the two thinkers' meanings of the term significantly overlap but are not entirely identical.

³⁰ "The truth of a sentence (of a kind introduced by a style of reasoning) is what we find out by reasoning using that style. Styles become standards of objectivity because they get at the truth. But a sentence of that kind is a candidate for truth or for falsehood only when a style of reasoning makes them so." See Hacking, "'Style,'" 191.

My point in this regard for Gestalt psychology is that incorporating observers' immediate experiences of optical illusions can be said to at least partly constitute a characteristic style of reasoning, the fulcrum around which much Gestalt experimental research and theoretical claims can turn.

rules of a language (be it ordinary language or a specialized language like mathematics), a style of reasoning provides the very means by which it makes sense.³¹

Gestalt psychology bears a number of earmarks of a Kuhnian paradigm.³² But Arnheim's remark, even as it was being spoken from within the paradigm (having been trained by Gestaltists), largely rests on the appeal of Gestalt psychology as a *style*. More precisely, Gestalt psychology invites a certain mode of experimentation that bears some key stylistic *features*. The most powerfully marked feature is the solicitation of spontaneous verbal responses in its subjects. Wertheimer's famous paper on apparent motion includes numerous quotes from his subjects. His case for "pure" ϕ -movement is made by appealing to his subjects' descriptions of what they saw, e.g.:

The observer, here, does not say that the line moves across, nor does he believe that the line moves across (from a to b), or even that it seems to move across. But, rather: "I see a, I see b, I see motion between the two, I see the 'across', the 'rotation'—not that of the line or lines, which are in their locations a and b—but a relatively stronger or weaker 'across' in itself."³³

This valuing and active use of spontaneous responses is claimed by Arnheim to reflect an attitude befitting an artist, not a statistician.³⁴ Moreover, the subjects' reports, offered in

³¹ See Hacking, "'Style' for Historians and Philosophers," reprinted in *Historical Ontology* (Cambridge: Harvard University Press, 2002), 178-199.

³² This is merely another way of noting Gestalt psychology as a specific school of thought. For Kuhn, paradigms in the hard sciences make a communal sense in the way that schools do, but form *the* dominant way of understanding the science at any given time. The existence of a number of competing and coexisting schools for Kuhn marks a pre-paradigm science. See Kuhn, *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press, 1962).

³³ Wertheimer, 1064.

³⁴ "The method...must be understood as deriving from a more basic attitude which respects the simple, strong, and spontaneous reactions of children, primitive people, and animals...an attitude which emphasizes the formative powers ... of the peripheral sensory processes, vision, hearing, touch, etc., which had been reduced by traditional theory to the task of carrying the bricks of experience to the architect in the inner sanctuary of mind. From this attitude results a strong sympathy with, and an intimate understanding of, the artist." See Arnheim, 71.

everyday language, give an extra “oomph” to the convincingness of the results, because they are not quite measurements imposed on a task from above. The subject is not forced to describe the experimental display in a certain way because an either-or answer is imposed on the subject; rather, the subject is forced to describe the display because *that is what the subject sees*. The display itself solicits the description.

It was this stylistic feature in particular, this *way* of doing science, which appealed to Michotte. Michotte’s early experience with methods of systematic introspection had appealed to his desire to study “higher-order” matters of meaning and function,³⁵ but it ultimately left him disillusioned; since the methods led to contradictory results, “they could not be treated as ‘scientific.’”³⁶ Michotte came to value verbal responses in subjects only inasmuch as they could be understood as “‘differential reactions’ that simply reveal the presence or absence in the subject of an event x , the nature of which necessarily remains hidden and unknowable to the experimenter.”³⁷ However, these responses may not be limited to automatic “yes-no” answers; they can include the way a subject “‘understands’ the [experimental] situation in which he finds himself, and his own reactions to that situation.”³⁸ Incorporating such information, for Michotte,

is especially important in the study of perception, where it is possible to establish a relation between the relatively simple and limited responses of the observers and the stimulus or complex system of stimulation. Then, one can determine by applying the principle of concomitant variations, the conditions under which the phenomenon x occurs, whatever it might be “in itself.” This is what is always done in experiments in psychophysics and is clearly applicable to the study of form perception.³⁹

³⁵ See EPP 28.

³⁶ EPP 33.

³⁷ EPP 33.

³⁸ EPP 33.

³⁹ EPP 33.

Psychophysical measurement had been missing from the data of introspection; psychophysical measurement made it possible to posit the existence of perceptual laws that bind our individual immediate experiences together.

In other words: by relying on spontaneous responses of subjects, Gestalt psychology resembles art. But *only* by subjecting these responses to concomitant variations—without which responses remain anecdotal and inapplicable to any public verification—is Gestalt psychology a *science*.

More specifically, in order to be informative, the response of an observer must be nestled within three conditions. First: the experimental set-up is controlled. Subjects need to be trained in where to look (i.e., eye movements need to be taken out of the experiment, by focusing on the display itself and often by being told to focus on certain points of the display) and what to expect (i.e., what counts as a result of the experiment). Second: the stimulus is artificial. Controlling the stimulus dictates how the activity of vision will be solicited, neglecting some factors (color, shading) and accentuating others (simplicity, symmetry). The stimulus must have, in terms of the experiment, a limited number of relevant visual qualities and a limited number of relevant ways in which those qualities can be seen. The degree of applicability of the results to everyday perception depends on the degree to which those basic qualities can be said to persist through everyday life. Third: no single spontaneous response, by a single test subject, counts on its own. At best, a single interesting response indicates a need to test it against the responses of other subjects. Without a generalizable result, one does not have a perceptual law; one does not yet even have science. These requirements are fairly pedestrian, but it is through them that Michotte

creates, independently of any contact with animators, something which looks exactly like animation.

4. The Experiments in Causality

Michotte's book, *The Impression of Causality*, is firmly entrenched within the Gestalt tradition. Gestalt psychologists form Michotte's primary theoretical reference points. The book argues that causal relations between things are *directly seen* by virtue of their movement-configurations (and not *inferred* or *learned*); the claim is intended to be analogous to Wertheimer's assertion that motion (apparent or otherwise) is directly seen, and not the product of judgment, inference, or eye movements. Michotte's thesis is typical of Gestalt theory in its insistence on the primacy of relations between parts and in its attempt to make learning and memory irrelevant to explanations in perception. When Michotte asserts that causality is directly seen, he is taking aim at David Hume's famous empiricist claim of the hidden, conventional, and potentially arbitrary relation between cause and effect.⁴⁰

But more importantly, Michotte's experimental method—postulating a perceptual law from corresponding variations between a visual display and the way that display is described by test subjects—is thick with the Gestalt style, and with Wertheimer's example in particular. By using stroboscopes and a tachistoscope, through which the times of exposure and of interval between exposure could be controlled, Wertheimer had investigated the conditions under which

⁴⁰ See Albert Michotte, *The Perception of Causality*, trans. T.R. Miles and Elaine Miles (New York: Methuen, 1963), hereafter PC, 7-10 and 255-265.

motion *as such* occurred in vision. Wertheimer had measured the differences between the optimal impression of two lines appearing *simultaneously*, two lines appearing *in succession*, and one line *moving toward* another line. He thus stuck to two very simple kinds of motion: across-motion (a figure moving in a straight line) and rotation (a linear figure moving around a central axis). Since each display of movement had only one phase, so to speak, there was no intervention of more complex factors that might affect the way a figure was perceived, like a change in direction or a change of speed. He sometimes used multiple moving lines in his displays to control for eye movements, but the lines did not interact.

Michotte investigated a perceptual matter more complicated than this. Michotte was after direct perceptions of *causal relations* between objects. As he puts it:

[W]hen we observe [cause-effect] operations, is our perception limited to the impression of two movements spatially and temporally coordinated, such as the advance of the knife and the cutting of the bread? Or rather do we directly perceive the action as such – do we see the knife actually cut the bread?⁴¹

This question was investigated through creations of what we might call, modifying Wertheimer's language, *apparent causality*. Wertheimer had asserted that apparent motion occurred at the level of perception, equal to perceiving any one point of the motion; Michotte sought to demonstrate that causal relationships between moving objects were *as much* a perceptual given as the impression of movement itself. As Michotte himself puts it:

[T]he production of movement is *directly experienced*. There is no question of an interpretation, nor of a "significance" superimposed on the impression of movement; in other words, what is actually "given" is not a mere representation or symbol of causality. In the same way as stroboscopic movement is not, strictly speaking, the "symbol" of a movement, but *is* a phenomenal movement, so the causality perceived here *is* a phenomenal causality.⁴²

⁴¹ PC 15.

⁴² PC 21, original emphasis. Michotte is not only citing the example of Wertheimer, but copying the structure of Wertheimer's logic in explaining ϕ -movement.

Nonetheless, problems of apparent *movement* (Wertheimer's domain) are distinct from those of apparent *causality* (Michotte's domain). The difference between the two is central to why Michotte matters for animation. Wertheimer is often cited in discussions within film theory on the psychological basic of our perception of cinematic motion more generally (live-action motion and animated motion alike).⁴³ The typical concern in theoretical discussions of cinematic motion is whether our perceived motion is "real" or "illusory," in reference to the relation between still photograms on the film strip and their projection speed.⁴⁴ While Wertheimer's experiments are concerned with the point in perception at which a string of successive stages gives rise to motion, Michotte is interested in how motion comes to appear one way (caused) and not another (uncaused). Wertheimer's apparent motion studies concerned what counts as movement.

⁴³ This doesn't mean that Wertheimer's experiments in apparent motion are taken to successfully explain the effect of movement in moving pictures, only that references to Wertheimer indicate a set of problems about distinguishing between stillness and movement. See, for example, Joseph Anderson, *The Reality of Illusion: an Ecological Approach to Cognitive Film Theory* (Carbondale, IL: Southern Illinois University Press, 1996), 61:

[E]xplanations associated with apparent movement such as Wertheimer's ϕ movement are...inadequate and misleading. It is more likely that motion in the motion picture is the result of the indistinguishability of the small frame to frame changes in a move from the continuous changes that occur in real motion in nature, resulting in the former being processed by the networks of the visual system as real motion. The visual system simply fails to detect the real difference between the successive changes in the static picture and the continuous changes of natural motion.

Viktor Shklovsky offers a discussion of cinematic movement that does not explicitly reference Wertheimer's ϕ -phenomenon but makes the same basic distinction in perception in "The Semantics of Cinema," in Phillip Simpson, Andrew Utterson, and K.J. Shepherdson, eds., *Film Theory: Critical Concepts in Media and Cultural Studies*, vol. 1 (London and New York: Routledge, 2004), 111-113.

⁴⁴ The literature on this topic is voluminous, and largely goes back to Henri Bergson's famous "cinematographic fallacy" in *Creative Evolution*, trans. Arthur Mitchell (New York: Henry Holt, 1911), 304-307. Various theorists and filmmakers (such as Jean Epstein and Gilles Deleuze) have taken up or challenged Bergson's claim that cinema's moving images do not really move. For an overview see Mary Ann Doane, *The Emergence of Cinematic Time: Modernity, Contingency, the Archive* (Cambridge and London: Harvard University Press, 2002), 172-205.

Michotte's experiments in causality isolated what counts as what I am calling *animated* movement: movement with a particular animated character.⁴⁵

The impression of causality may be defined as a kind of Gestalt switch, when the movements of shapes or patches on a flat plane are *seen as* having attributes that we have no obvious reason to assume them as having: force, impact, inertia, etc. For Michotte, the latter characteristics distinguish *movement* from mere *displacement* (or change in position).

Displacement is motion that simply *is*, while movement *belongs* to something. To qualify as Michotte's kind of movement—what I'm calling animated movement—a thing must appear to be moving on its own, or be moved by something else. To attribute movement to a thing, it must be able to have a more specific verb attached to it. It must be *pushed*, or *fall*, or *slip*, etc.

Wertheimer had observed that his subjects would often describe ϕ -movements in varying terms,⁴⁶ but his research does not explore these variations in any detail. Φ -movement is relevant to the question of how perceived movement persists through the projection of successive frames, while Michotte's study is relevant to the question of how animated pictures can exhibit movements with particular physical or animistic properties. Things that appear to be in motion are not “animated” simply by virtue of changing location. They do not become animated when we cease to spot the difference between successive frames (for often in animation we *can* spot

⁴⁵ Noël Carroll has also used Michotte's experiments in causality to form an idea of “cinematic ampliation” in avant-garde film, loosely applying some of Michotte's findings to editing patterns that yield patently impossible cause-effect relations. See Carroll, “Causation, the Ampliation of Movement and Avant-Garde Film,” in *Theorizing the Moving Image* (Cambridge: Cambridge University Press, 1996), 169-186.

⁴⁶ “[T]he motions vary with the nature of experiment: a ‘rapid across,’ a ‘lazy, slow rotation,’ a ‘quiet rotation,’ a ‘rotation with a jerky beginning and end,’ etc.” Wertheimer, 1065.

the differences between frames, especially in particularly extreme or violent shifts of position), but when they gain a character of force.⁴⁷

Force itself is not easily thought of as visible. As Costall notes, “the fundamental question addressed by Michotte in his work on causality is bound to sound rather paradoxical: What does mechanical causality *look* like?”⁴⁸ Michotte wanted to study the means by which we observe causal relations among objects in the world, but in order to make the necessary observations he had to *isolate* the objects from the impression of their causal interaction (fulfilling requirement two detailed in the previous section). This meant constructing experimental conditions in which objects were *appearing* to collide, push or pull on each other, etc., but were really moving independently. (An example would be setting up two billiard balls on a table at different planes of action so that, viewed from a sufficient distance, they appeared to be next to each other). But manipulating conditions of objects in space “does not lend itself well

⁴⁷ This is more or less the difference between wondering, “how can that photographed man be moving? It’s only a string of photographs,” and wondering something closer to, “how can Daffy Duck be walking? He’s just a drawing.” Photographed movement is a matter of *restoring* impressions of real-time movement that have been cut up: if the recording and projection are done correctly, the man will appear to be walking on screen because he was walking. Animated movement is not a matter of restoring movement but of creating it from scratch: frames of Daffy need to be drawn and arranged *in a certain* way for him to walk, and not run, tiptoe, etc.

My theoretical focus on animated motion is not an attempt to exhaustively describe every possible instance of animation. (Most obviously, much of abstract animation makes no attempt to suggest physical forces or animacy in its frame-by-frame manipulations.) Animated motion is a powerful automatism within animation practice, but it is *not* a necessary condition for animation. Indeed, there likely is *no one* necessary formal condition for an animated film. Even though we unproblematically define animation as “movement created frame-by-frame rather than recorded in real time,” there are all sorts of examples that liberally use live-action movements which are otherwise sped up, slowed down, isolated, or reproduced. Raoul Servais’s *Harpya* (1979) and Norman McLaren’s *Canon* (1964) and *Pas de deux* (1968) are typically considered animations, even though Servais’s only manipulations consist of speeding-up his actors’ movements, and McLaren’s only intervention consists of occasionally pausing the action of two ballet dancers and repeating it with an optical printer. Conversely, there are animators like Robert Breer who manipulate their works frame-by-frame, but have little or no interest in fulfilling the requirements of continuity between frames that would allow for anything like “motion” or change to be perceived. (Moments of recognizable movement in *Eyewash* (1959) and *Blazes* (1961) last less than a second.) These examples are “animations” because they are made by members of an acknowledged community of animators.

⁴⁸ Costall, 53.

to a sufficiently large range of experimental variations.”⁴⁹ So Michotte tested impressions of causal interactions by “optical methods”: representations of shapes on a flat surface, made to move in precise ways.

Michotte performed his tests with two apparatuses, the “disc method” and the “projection method.” In the disc method, curves were drawn on discs that revolved behind a slitted paper screen. Through the slit, a viewer would see what appeared to be one square moving toward another square (or moving away from it, as the case may be).⁵⁰ The discs were electrically rigged to rotate at a uniform speed.⁵¹ By controlling the slope of the curves, Michotte could control the apparent speed with which the “squares” moved. The projection method involved two image projectors atop rotating platters. Changing the angle of a projector’s beam of light made the projected images move across a screen (like a laser pointer). The projection method could test more variables (e.g., the shape of objects or the relative paths of movement), but it was more cumbersome to implement, leaving it reserved for “control purposes and also for experiments which could not be performed any other way.”⁵² Stroboscopic methods were not used. Although Michotte notes that identical results *could have* been obtained with a “cinematographic method” (i.e., drawing objects on frames of film), the method was far too labor-intensive for his purposes.

⁴⁹ PC 27.

⁵⁰ The experimental display is based on “the well-known illusion of movement [that occurs] when a strip of paper with a slanting line drawn on it is moved vertically behind a horizontal slit cut in a screen. In such circumstances, as is well known, we see an object or colored spot traveling sideways from one [side of the] slit to the other.” (PC 27.)

⁵¹ PC 309. This citation is from an appendix that Michotte added to the work in 1961, offering a broad summation of his methods, assumptions, and findings, and his assessment of advancements since the original work.

⁵² PC 40.

These methods were means of isolating the variables of time, distance, and speed as they affected the impression of causality. All of his experimental displays were variations on a single two-stage action:

- 1) Shape A (usually a square) moves toward shape B (another square)
- 2) Shape B moves

Michotte's research was driven by the question: under what conditions does A appear to *cause* B to move, and under what conditions do A and B seem to simply move independently?

Michotte approached this question in a manner very similar to Wertheimer's experiments in apparent motion: by tweaking stimulus conditions with small variations, based on spontaneous responses of subjects. Φ -motion and apparent causality were not studied through a limited number of formalized beginning-to-end trials, but through scores of tiny informal experiments, which often yielded unexpected descriptions that prompted further informal experiments. Michotte's book lists seventy-two separate experimental arrangements.⁵³ Because Gestalt psychology relies on noting qualitative leaps in perception, a certain degree of eyeballing with repeated trial-and-error is necessary to get an indication of when a qualitative change occurs and what the change looks like. Because the perceptual data being tested is immediately given, the results of a change are obvious, and the experimenter is free to manipulate the display at will until significant results come about.⁵⁴

⁵³ I include here (and discuss more generally) only those experiments that pertain to what Michotte called "quantitative" or mechanical causality, which only dealt with movements. Michotte performed another series of experiments on what he called "qualitative" causality, when one object is seen as triggering a formal change in another object's properties (e.g., object A makes object B change color or disappear). The results of these experiments were inconclusive.

⁵⁴ Thus, Michotte's experimental apparatuses tended toward the quick and the cheap. The disc method needed only ink and paper, and creating new displays was only a matter of cutting out new paper circles and drawing new lines according to the proper calculations. The only differences between the disc method and an optical parlor toy

A number of different manipulations yielded different answers, resulting in a wide variety of visual effects. The strongest version of this occurs in the “Launching Effect,” when there is little or no delay between A’s approach and B’s withdrawal. Subjects got the impression of A hitting B and sending it off. The impression is of a single event, wherein B’s movement “belongs” entirely to A. Adding a slight delay between A’s approach and B’s withdrawal produces the “Triggering Effect.” The delay yields the impression that B is moving on its own, but *in reaction to* A. The Triggering Effect gives rise to odd and vivid “as if” descriptions of the movement:

While in the case of launching [observers] tend to say such things as “A drives away B”, “A launches B”, and so on, the expressions used to describe triggerings are very varied, and stress both the autonomous character of B’s movement and its dependence on A. Some very amusing descriptions are given: “It is as if A’s approach frightened B, and B ran away”, “It is as if A in touching B induced an electric current which set B going”... and so on. Also this experiment often produces a comic effect and makes the observers laugh. This never happens with the Launching Effect.⁵⁵

The Launching Effect appears as a smooth singular event; the Triggering Effect appears as a two-stage event. If the delay is increased enough, the objects will appear to move totally independently. Another key type of movement Michotte describes is the “Entraining Effect,” where A seems to pull B along after making contact with it.⁵⁶

Michotte’s argument for the impression of causality as a structural feature of perception is built on the basic point that the impression does not depend in any way on the material or

were the electrically-regulated rotation of the disc and the enforcement of a fixed distance from observer to display.

For even more quick and schematic testing, Michotte constructed a handheld slitted metal sheet with a beveled edge. Sliding rough pencil drawings of small papers across the sheet offered possible speeds to test more rigorously. This, functionally speaking, *is* an optical toy. See PC 40.

⁵⁵ PC 121.

⁵⁶ See PC 150-161.

formal features of the “objects” themselves. The impression only depends on precise relations of timing and distance among the “objects” being moved. When an experimental display was transferred from the disc method to the projection method, the results “at every point confirmed those obtained by the first [method].”⁵⁷

The wide-ranging vividness of observers’ open-ended descriptions of the phenomena is central to Michotte’s case for their perceptual givenness: the stranger the description of the movement (i.e., the less obvious its relation to the literal features of the stimulus), the more convincing the effect. In these cases, people are being compelled to describe what they see in ways that are patently implausible or nonsensical. The fact that a causal impression does not need any physical manifestation is, as Michotte notes, itself strange; but some specific manipulations yield strange individual impressions of their own. Michotte appropriately calls these “paradoxical cases,” and they form the crux of his argument against an Empiricist psychology of causality (in the same basic way that Wertheimer’s ϕ -movement is most powerfully asserted through the experiments where pure ϕ was obtained⁵⁸). Among these cases is the fact that a perfect Launching Effect occurs if A hits B while B is moving and, after being struck, B *slows down*. This impression runs contrary to the laws of physics and to intuition: when moving objects are struck with a directing force while already moving in that direction, they are supposed to *speed up*. Logically—and, presumably, based on previous experience—B’s

⁵⁷ PC 37. Meaning that it did not matter what form the shapes took, whether paper or light; the same perceptual rules held. Moreover, the projection method proved irrelevant two possibly confounding features of the disc method: the slight change of shape in the squares with deeply-sloping curves (giving “an image of a diamond shape [instead of a square] which is more marked the greater the slope”) and the fact that subjects often saw the movement twice or more in the same test (PC 37).

⁵⁸ Wertheimer reports: “[In] this separation of the ϕ phenomenon from the visual objects a and b, there were also cases where two pure ϕ -motions (rotations) appeared from a *single* a, and in such a way that it did not seem in any sense as if a was being split into two parts.” This description is plainly compelling precisely because it is nonsensical. See Wertheimer, 162.

slowing-upon-impact should favor an impression that B is slowing down of its *own* accord, forming a separate event. Yet this is not what is seen. Subjects see a single event, as in a typical launching experiment.⁵⁹ Another paradox occurs in a version of the Entraining Effect, where A moves slowly toward a motionless B, then, upon contact, both take off quickly. The display solicits descriptions like, “‘It is as if A tiptoed up behind B’, ‘It is like a cat creeping up to a mouse, and then pouncing and carrying it off.’”⁶⁰ Resorting to such descriptions, for Michotte, is clear evidence for the counterintuitive yet immediate and undeniable integrity of the impression:

From the point of view of mechanics we have here a paradox, and it is clearly for this reason that subjects resort to these somewhat droll comparisons in order to make sense of the unusual appearance of an Entraining Effect which, despite its paradoxical character, cannot be seen any other way.⁶¹

The independence of the impression of causality from the kind of object to which it was subject is demonstrated most forcefully in what we might call the “different worlds” experiment. In it, Michotte applied the timings of a basic Launching Effect to two different kinds of materials: a wooden ball rolled in the direction of a red circle projected on a screen, with the circle moving away at the moment of contiguity. Despite the fact that the objects “appear to belong, as it were, to different ‘worlds’,”⁶² the effect still holds. Michotte repeatedly states the importance of results like these as exemplifying the whole nature of the impression of causality, where “causal impressions arise as soon as the psychological conditions of structural

⁵⁹ See PC 71. Michotte repeatedly belabors the point that “there is no parallelism between the causal impression and the degree of physical force [implied by the relative speeds of A and B]. Instead the impression is rather better and more stable when the efficacy of the ‘cause’ – as shown in the speed of the projectile – is less!” (PC 109.)

⁶⁰ PC 159.

⁶¹ PC 159.

⁶² PC 84.

organization are fulfilled...even in situations where we know from past experience that a causal impression is a downright impossibility.”⁶³

The impression of causality persists through repeated exposure; no amount of training and no matter of knowledge of the explanation behind the phenomenon enables one to see the impression differently. The impression is, in current parlance, *cognitively impenetrable*. Gestalt psychologists tended to make a great deal out of the fact that their illusions were cognitively impenetrable. Wertheimer took the cognitive impenetrability of the ϕ -phenomenon as the strongest evidence against a judgment-based theory of perception:

Time and again [ϕ -motion appears], although the observer *knows* that he is dealing with two stationary stimuli in separation and succession. *With repeated, careful* observation, with *prolonged* observation...with *careful training* in the observation of tachistoscopic phenomena, with thorough *experience* (after all, one has learned the various phenomena, even the stationary succession, etc., in all their numerous variations)—illusions of judgment should grow weaker and disappear, but this is not the case; rather the contrary occurs...⁶⁴

This was a way for the Gestalt movement to advocate for the primacy of perceptual configurations; however, it is not an ironclad case for Gestalt theory. As later debates have shown, the distinct impenetrability of such experiences “does not [in itself] explain *how* perceivers come to discriminate them as such; the latter issue requires proper developmental investigation.”⁶⁵ Nor does it give evidence for the physiological isomorphism that Kohler invoked throughout his career, for the features of the perceptual structures say nothing about the physical implementation of those structures. Indeed, it is in the very nature of a cognitively impenetrable illusion to *isolate* the perception from the observer; the impressions demonstrate a

⁶³ PC 71.

⁶⁴ Wertheimer, 1978, original emphasis.

⁶⁵ Costall, EPP 58, emphasis added.

stubborn unknown independence. (Christian von Ehrenfels's assertion of the "Gestalt" qualities of a melody became the namesake of Gestalt psychology, but Wertheimer's original 1912 paper had expressed doubts about the explanatory value of von Ehrenfels's notion, on the grounds that pure ϕ -movement could be seen *independently* of either a or b.⁶⁶) Thomas Kuhn took a set of Gestalt experiments to indicate the stubbornness of *learned* habitual knowledge, and the holistic Gestalt switch became the central image of a paradigm-shift in a scientific community: proof not of the inherent stability of knowledge in the world but of the ability of people to see the same world in totally different terms.⁶⁷ Cognitive scientist and philosopher Zenon Pylyshyn later introduced the distinction of "cognitively penetrable" and "cognitively impenetrable" precisely to demarcate *separate levels* of explanation.⁶⁸ Pylyshyn's research into vision takes the cognitive impenetrability of visual illusions to be evidence of modular automatic processes, operating below the level of consciousness.⁶⁹ Michotte's methods, grounded in a style of experimentation inherited from Gestalt psychology, yielded a demonstration that the perception of certain functional relationships occurs automatically, regardless of whether they are in the world or not—effectively the opposite of the Gestalt ethos.

⁶⁶ See Wertheimer, 1079-1080.

⁶⁷ See Kuhn, 62-64 and 111-135. The importance of what he calls Gestalt experiments and the Gestalt switch, while central to Kuhn's idea of paradigms in science, is largely metaphorical and speculative. Obviously, Kuhn's philosophy of science is not in itself a refutation of Gestalt theory. My point is that the importance of Gestalt experiments, procedures, and results outlived the world-view that they were thought to support.

⁶⁸ See Zenon Pylyshyn, *Computation and Cognition: Toward a Foundation for Cognitive Science* (Cambridge: MIT Press, 1984), 130-145.

⁶⁹ See Pylyshyn, *Seeing and Visualizing: It's Not What You Think* (Cambridge: MIT Press, 2003). The criterion of cognitive impenetrability has become a lynchpin for cognitive film theory: the marker where cultural variation ends and biological hardwiring begins. See, e.g., Jinhee Choi, "Fits and Startles: Cognitivism Revisited," *Journal of Aesthetic Art Criticism* 61.2 (Spring 2003), 149-157.

5. Norman McLaren in animation history

Norman McLaren began his career much like other experimental animators of the 1930s: with a deep painterly commitment to exploiting the materials of film and the nonphotographic possibilities of motion.⁷⁰ But when he took the role of leading the National Film Board of Canada's animation division in 1941, McLaren's career path and the nature of his work became severed from the contemporaries who had inspired him. Oskar Fischinger, whose geometric abstractions of classical music had left a profound influence on McLaren,⁷¹ had a brief and tumultuous relationship with Disney in the late 1930s that ultimately left him freelancing in Los Angeles and able to produce very little original work in his remaining years.⁷² Len Lye's early development paralleled McLaren's in some ways—both filmmakers “invented” the technique of painting directly on a clear filmstrip, independently of each other, and both worked under the John Grierson at the GPO in Great Britain in the 1930s—but Lye shortly thereafter went into a long professional silence on animation.⁷³ At the NFB, McLaren worked comfortably in a government-funded facility that allowed him to produce roughly a film a year well into the 1960s. McLaren enjoyed a level of exposure that no member of the early twentieth century

⁷⁰ Terence Dobson argues that McLaren was primarily interested in applying modern painterly problems of form and movement to film, which puts his sensibility roughly in line with Fernand Leger, Man Ray, Laszlo Moholy-Nagy, Oskar Fischinger, Len Lye, and other members of the canonical cinematic avant-garde. See Dobson, *The Film Work of Norman McLaren* (Eastleigh, UK: John Libbey Press, 2006), 27-37.

⁷¹ McLaren cites in particular Fischinger's *Study No. 7* (1931) as revelatory. See Dobson, 35.

⁷² See William Moritz, *Optical Poetry: The Life and Work of Oskar Fischinger* (Bloomington: Indiana University Press and John Libbey, 2004).

⁷³ See Roger Horrocks, *Len Lye: A Biography* (Auckland: Auckland University, 2001), cited in Andrew Johnston, *Pulses of Abstraction: Episodes from a History of Animation*, PhD. dissertation (University of Chicago, 2011), 81-82.

avant-garde could have hoped to achieve. The upsurge of film societies and film festivals after World War II supplied a regular specialized audience for his efforts. Amos Vogel's famed Cinema 16 society in New York City all but canonized him as essential to its alternative model of film exhibition and connoisseurship.⁷⁴ McLaren's shorts met with similarly enduring success in major film festivals, notably Cannes.⁷⁵ In his write-up for the 1958 Brussels International Experimental Film Festival, Vogel summed up McLaren's legendary status as simply *assumed*; he refers to McLaren (a jury member at the Festival) as "the eminent animator, in danger of being a saint in his own lifetime, dazedly observing a parade of imitators of his own style."⁷⁶

⁷⁴ Two McLaren shorts, *Hen Hop* and *Dollar Dance* (both 1942), appeared on Cinema 16's second-ever film program in 1947, and the organization invited McLaren in person to its first special one-man event in 1948 to screen new works and discuss his animation techniques in detail. See Scott MacDonald, ed., *Cinema 16: Documents toward a History of the Film Society* (Philadelphia: Temple University Press, 2002), 94 and 112. All in all, a McLaren short appeared on a Cinema 16 program at the average rate of one per year between 1947 and 1953. (See MacDonald 103, 142, 167, 184, 198). Cinema 16 made it a point to screen the works of numerous nonphotographically experimental filmmakers such as Fischinger or the Whitneys, but none were screened as reliably as a McLaren. A comparable success was attained by UPA, whose cartoons ran semi-regularly in Cinema 16 programs through the early 1950s.

It is important *not* to assume from this (or from his comparable success at film festivals) that McLaren was actively preferred to the high modernist experiments of Lye, the Whitneys, et al.—leading, consequently to the conclusion that he was a populist answer to the styles of the latter. Such a claim would assume all the players to be on equal competitive footing, when McLaren's coziness at the NFB kept him away from the struggles for production resources or distribution. McLaren, by virtue of his position, was able to fill the demand for content in a way the others were not.

McLaren's recognizable name value also emerges clearly in advertisements of 16mm distributors, both for film societies and for educational purposes. See, e.g., Contemporary Films Advertisement, *Film Culture* 26 (Fall 1962), 79, and International Film Bureau advertisement, *Film Library Quarterly* 1.4 (Fall 1968), 7.

⁷⁵ *Blinkity Blank* (1955) was a particularly notable success in this regard (if often misspelled in reports of it). See Lotte Eisner, "Reflections of the Cannes Film Festival," *Film Culture* 1.4 (Summer 1955), 13-15; Peter Hollander, "Edinburgh Film Festival" *Film Culture* 1.5-6 (Winter 1955), 24-5; and Lindsay Anderson, "Cannes 1955," *Sight and Sound* 25.1 (1955), 48-50. Francois Truffaut beams over *Blinkity Blank* in his *The Films in My Life*, trans. Arnold Mayhew (New York: Simon and Schuster, 1978), 269. Truffaut is presumably recounting the screening at Cannes when he says that "McLaren had the whole theater laughing at simple curves that were glimpsed for less than half a second accompanied by a few synthetic noises."

⁷⁶ Collected in MacDonald, 337.

This legendary status only increased with the establishment of the International Association of Animated Film (ASIFA) in the 1960s, of which McLaren was the first president.⁷⁷ While a number of other animators had exemplary status in this community (such as Jiří Trnka, Alexander Alexeieff and Clare Parker, and Lotte Reiniger), McLaren embodied the possibilities of animation as an artform in a particularly acute way. As it was put in his ASIFA obituary when he died in 1987, McLaren was “the only filmmaker in the world whose government (by means of an intermediary measure) requests of him to discover new means of animation & direct their application.”⁷⁸ That is, McLaren’s primary purpose to the art of animation was seen as that of virtuosic boundary-tester. Ralph Stephenson in *The Animated Film* (1973) writes a slightly more detailed version of the typical assessment: “If [McLaren] deserves to be called great, it is as a craftsman and an innovator. The immaculate perfection he has achieved in many styles, the precise effects, the fine detail...these are McLaren’s glory, his claim to fame.”⁷⁹ McLaren’s career, perhaps more than anyone else’s in the history of animation, is marked by an avowed refusal to stay within a single technique. Reiniger, Alexeieff and Parker, and Trnka had expanded animation’s vocabulary by working tirelessly within a relatively narrow zone of focus: cutout silhouettes, “engravings” on a stretched canvas of thousands of headless pins, and delicate lipless puppets, respectively.⁸⁰ What sums up McLaren’s achievement as an animator is the impossibility of summing him up in a single achievement.

⁷⁷ See chapters one and four on the role played by ASIFA in coalescing the concept of “animation.”

⁷⁸ Louise Beaudet, “An Irreparable Loss,” *AnimaFilm* 11 (March 1987), 1. Beaudet is paraphrasing animation critic André Martin in the remark.

⁷⁹ Stephenson, 75. The book is a revision of his 1967 *Animation in the Cinema* (see chapter one).

⁸⁰ Trnka and Alexeieff and Parker did experiment with multiple techniques, but were best-known for the methods noted above.

McLaren himself noted toward the end of his career that his greatest satisfaction “has been rather like that of an explorer discovering new territory. Evolving new techniques, or new uses for old techniques has always exhilarated me.”⁸¹ In the 1940s he perfected the “chain of dissolves” or “chain of mixes” method, in which gradual changes in a single picture could be superimposed through double-exposures. The technique was originally designed to simulate straight z-axis movements into deep space: McLaren left his drawings static on the animation stand and overlapped them through a series of zooms, hurtling a viewer forward through flat representations separated by gulfs of black space, in *C’est l’aviron* (1944). As soon as he’d perfected the zooms, he began using the dissolves to incrementally alter a single pastel drawing, creating a stationary view of an ever-metamorphosing landscape (see, e.g., *A Little Phantasy on a Nineteenth Century Painting* (1946) and *La poulette grise* (1947)).⁸² While working through these methods, his direct painting grew less and less recognizable, acquiring Lye-like layers of

⁸¹ McLaren, “Statement on My Own Work,” (signed) January 15, 1974. In National Film Board online archive: <http://www3.nfb.ca/animation/objanim/en/filmmakers/Norman-McLaren/archive.php?idarchive=616178&sort=textes>. Last accessed June 15, 2012.

⁸² The former use of the technique is likely an effort to explore depth effects similar to Disney’s multiplane camera, which had been developed in the late 1930s. While Disney used the camera to simulate complex tracking shots, floating *across* a landscape while gliding *into* it, McLaren’s technique is limited to a single dimension of perspectival movement, going monotonously forward, like the view from a car windshield. And radically unlike Disney, McLaren was only interested in the *sensation* of deep space, not the *reproduction* of it. *C’est l’aviron* incorporates a number of symbolic pictures along its trajectory that would make no sense together as a real-time event.

Applying the chain of mixes to pastels is almost undoubtedly inspired by Alexeieff and Parker’s pin-screen, wherein nothing quite “moves” (in the traditional sense of changing location), but landscapes and faces keep slowly altering before one’s eyes. Fischinger’s *Motion Painting No. 1* (1947), would use a variation of this method; but whereas the pin-screen and pastels could “wipe clean” pieces of the picture (or the whole picture), Fischinger incrementally added paint to a sheet of glass. As a result, in Fischinger’s short, once a swatch has been painted it does not go away—it is only occluded by more and more layers of paint. The effect in Fischinger is that of a remarkable surface that is both immaterial and infinitely thick. One keeps wondering how much more paint can be coated on top of paint. The effect of the pin-screen is that of a semi-spatial medium coming up to meet the viewer almost directly; the knowledge that there is space beyond the pin-screen, combined with the lack of ability to see beyond the pin-screen, makes the metamorphoses overwhelming and almost claustrophobic. McLaren’s endless forward zoom is borderline dizzying in its repetitiousness. The evolving pastels tend to be spacious and austere, chiefly because McLaren tends to focus on wide-open landscapes with gentle colors.

color that abolished the horizontal boundaries of the frame (see *Fiddle-de-Dee* (1947) and *Begone Dull Care* (with Evelyn Lambart, 1949)). In the 1950s he stopped painting on film altogether, and began manipulating live actors in real spaces frame-by-frame (a trick that came to be called “pixillation;” see *Neighbors* (with Grant Munro, 1952) and *Two Bagatelles* (with Munro, 1953))—only to return to working directly on the filmstrip, through scratching emulsion off of black film (rather than adding color to clear leader; see *Blinkity Blank* (1955), *Short and Suite* (1959), and *Serenal* (1959)). In the 1960s McLaren’s interest in pixillation gave way to a different way of “animating” live actors by doubling their movements with an optical printer, creating new patterns implied in but not foreseen by the actors’ original recorded movements (see *Canon* (with Munro, 1964) and *Pas de deux* (1968)). While all of *this* experimentation was happening, he worked steadily with paper cutouts (see, e.g., *Alouette* (with René Jodoin, 1944) and *Le merle* (with Lambart, 1958)). Additionally, he developed a method for making stereoscopic animation with an optical printer (see *Now is the Time* (1951) and *Around is Around* (1953)), and he helped create three different systems for directly “animating” a film soundtrack without recording any sound.

McLaren cannot be said to have unequivocally authored all of these techniques, but the world of animation saw no filmmaker who worked so thoroughly in so many of them, absorbing each method with a depth that yielded at least one recognized major achievement in almost every one of them. McLaren isomorphically (though not exhaustively) *was* animation. The mantra-like status of his remark that “animation is not the art of drawings that move but the art of movements that are drawn” claims its authority less from what it says than from who said it.

6. McLaren's "ambivalent" experimentation

The remark though, like McLaren's body of work, is ambiguous. In fact, it highlights the central ambiguity of McLaren's work, as articulated by David Curtis. The ambiguity is this: Accounts of animation tend to revere him purely on technical grounds, implying an undercurrent of cold formalism and detachment. Yet despite McLaren's restless experimentation, he is routinely ignored or disparaged in accounts of avant-garde film.⁸³ He seems impossible to locate: too fraught with abstraction for the representational ambitions of most animation, but "too orthodox, too compromised, [evading] too many questions" to be truly radical.⁸⁴ Curtis goes on to systematically describe each realm of McLaren's experimentation as blinking in the face of

⁸³ With the idea of experimental film becoming more and more radicalized from the mid-1950s onward, McLaren was seen as increasingly unnecessary to the avant-garde's pedigree, effectively a backlash against his popularity. The earliest example of such criticism I can find is by Noel Burch in a 1959 review of Robert Breer's early work:

McLaren's films were never more than facile, startling divertissements, devoid of any genuine rigor and completely 'one-dimensional'; when you had seen one you had seen them all (McLaren finally realized this, of course, but unfortunately chose a new path on which he can only squander his talents), whereas even Breer's detractors generally have to admit that their highly condensed complexity, both formal and emotional, set his films quite apart from the illustrious Canadian's 'little fantasies.'" (Burch, "Image by Images, Cats, Jamestown Ba-Looes, A Man and His Dog Out for Air (films by Robert Breer)," *Film Quarterly* 12.3 (Spring 1959), 56.)

The rising stock of filmmakers like Stan Brakhage, Robert Breer, and Michael Snow coincided with increasingly detailed analyses and theoretical studies, in journals like *Film Culture*; as a result, McLaren has been retroactively written out of the history of the avant-garde (partly on the basis of an assumed familiarity with him in comparison to the independents), and his legacy is largely available only in brief journalistic spurts. For example, Malcolm LeGrice makes McLaren a more popular and critically unfavorable point of comparison with Len Lye: "It is however unfortunate that the [post-GPO] work of McLaren is much better known than that of Lye.... While [McLaren] has produced a number of pleasant and interesting works, he has only a minor place in the development of new film form. Unlike Lye, he has never been a major formal innovator." See LeGrice, *Abstract Film and Beyond* (Cambridge and London: MIT Press 1977), 70.

In P. Adams Sitney's *Visionary Film*, McLaren is written out of the history of nonphotographic experimentation entirely, with Len Lye being the sole non-American representative of a graphically-oriented cinema. See Sitney, *Visionary Film: The American Avant-Garde 1943-1978* (New York: Oxford University Press, 1979), 229-232. David Curtis's own *Experimental Cinema* also artfully evades the questions of categorizing McLaren by neglecting to mention him. See Curtis, *Experimental Cinema* (New York: Delta Publishing, 1971).

⁸⁴ David Curtis, "Locating McLaren," collected in Nina Danino and Michael Mazière, eds., *The Undercut Reader* (London and New York: Wallflower Press, 2003), 174.

the material and formal implications of his work and bowing to a cutesy popular appeal; from the opposite end, Stephenson criticizes McLaren's tendency to lapse into formal exercises. McLaren is either too representational or not representational enough.⁸⁵

Various comments by McLaren himself seem to support this idea of an animator flip-flopping between the daring and the conventional. He worked under the constant threat of boredom. In describing the structure of *Blinkity Blank*, he claims, "I wanted at first to make an abstract film but having completed two-thirds, considered I wouldn't be able to hold the spectator's attention. So I returned to birds and other figural elements."⁸⁶ His comments on *Spheres* (1969), a film he made with René Jodoin that consists entirely of circles changing patterns in space, is even more indicative in this regard. He describes the challenge of the film as follows:

[We] set ourselves the exercise and goal of making an abstract film which would use only sphere-like circles whose animation would be restricted to constant motion. Accelerations & decelerations were so much a part of the motion and interest of abstract as well as figurative animated films that we wished to discipline ourselves with the challenge of constancy. The greatest risk we could run would be that of mounting monotony. We would attempt to compensate for this by gradually increasing the number of spheres, and the paths they followed; but here again we limited ourselves to straight-line, horizontal, vertical, diagonal & circular paths movement.⁸⁷

Yet even with the introduction of these variations, McLaren was not satisfied with the results:

"On completion of the picture, we considered the film as a whole (though perhaps calming to the

⁸⁵ This vacillation remains the dominant interpretation of McLaren's work as a whole. Even synoptic scholarly works which seek to defend him against such charges do so by explicit or implicit arguments against the ideals of abstraction or high modernism. See Dobson; see also William Moritz, "Norman McLaren and Jules Engel: Post-Modernists," in Jayne Pilling, ed., *A Reader in Animation Studies* (Sydney: John Libbey, 1997), 104-111.

⁸⁶ Quoted in Curtis, 178.

⁸⁷ McLaren, "Technical Notes on *Spheres* (1969)," in *Technical Notes (1933-1984)*, compiled by the National Film Board of Canada, 55: <http://www3.nfb.ca/animation/objanim/en/filmmakers/Norman-McLaren/archive.php?idarchive=619357&sort=textes>. Last accessed June 5, 2012.

nerves) to be visually too monotonous for release.”⁸⁸ McLaren stuffed a section of *Spheres* between two pastel-altered landscapes and released the tripartite result as *A Phantasy* in 1948. But “about twenty years later, 1968, its visuals seemed definitely more tolerable (perhaps because of my exposure to the “minimal” & geometric “op” art movements of the 1960s).”⁸⁹ The original experiment was set to an existing Glenn Gould performance of Bach and released in its entirety.

These examples seem to indicate a fundamental ambivalence throughout McLaren’s career about what kind of animator he wanted to be. He seems unable to decide between pursuing two kinds of novelty. His endless desire to challenge himself with new methods we might call a high modernist “historical” novelty, of the kind valued by Adorno and Clement Greenberg, perpetually seeking to burst open previously-held standards in one’s artform (even if that means destroying the hard-fought discoveries in one’s own previous work). The constant need to pull back the moment before boredom sets in with any given work we might call “mere” novelty, an exhibitionism whose value is ephemeral and inconsequential. (This would be the difference in proclaiming Cubism as “new” and proclaiming a scent of soap as “new.”)

This is a false dichotomy though, for two interrelated reasons. First, given McLaren’s lifelong interest in testing technical possibilities, a distinction between his own boredom (i.e., the sense that he’s exhausted the possibilities of a technique) and a fear of an *audience’s* boredom is not so easily made. (On what basis could McLaren have assumed that casual Canadian viewers shared his familiarity with minimalism and op art in the 1960s, much less a taste for it?) Both cases come down to the point where a technique stops being informative and starts becoming

⁸⁸ McLaren, “Technical Notes,” 56.

⁸⁹ McLaren, “Technical Notes,” 56.

repetitive. Second, and much more indicatively, the dichotomy assumes a principled difference between “formal” explorations and “representational” elements in McLaren’s work that simply does not hold. McLaren always tested the limits of a technique by intermingling the two.

Or, rather, he continually confronted the spectator with ambiguous cases of figures in motion which seemed to be *both* formal *and* representational at the same time. This was the novelty that McLaren continually pursued across multiple technical means and required the unending pressure of boredom.

7. McLaren’s consistent inconstancy

To illustrate, it is necessary to qualify the judgment on *Blinkity Blank*. McLaren claims that the first two-thirds of the film are abstract and the final third a “return” to “birds and other figural elements.” This statement is partially correct but ultimately misleading. In the last two-and-a-half minutes of the five minute film, one *can* discern something like a narrative between two birds. One of the film’s two primary figures, a blue figure (its complement is a red figure), transforms from an upside-down umbrella into a schematic bird. While this is happening, the red figure flutters about as two small feathery points. The blue bird tries to get a hold of the red figure (now coiled up like an earthworm), which responds by exploding like a fireworks display. This act initiates a game, in which the bird repeatedly approaches the red form (now no longer a worm), which keeps frightening the bird away with an explosion or a frightening face. The red shape suddenly assumes the form of a bird itself, causing the blue bird to faint. The red shape turns into a face that laughs heartily at this development, then, without significantly

altering its constituent parts, changes its manner of movement into a birdlike form that stands up to examine the blue bird. At this point, the blue bird undergoes a transformation of its own through a series of dissolves, eventually turning into a coiled, quasi-mirror image of the red bird. The two interact and further transform until they couple into (presumably) a mating that produces both an egg and an ecstatic flight into suddenly-three-dimensional space. The egg hatches into a chick, which ends the short.

Something like a conflict, a resolution, and a denouement take place, but the integrity of this narrative is constantly undercut by the multiple metamorphoses each figure undergoes, some more subtle than others: when the blue bird is approaching, it still looks like a bird but changes form every time it darts offscreen. The transformations, moreover, are so dense and so quick that it is impossible to make out anything more than a sketch of a development. But most importantly, the birdlike forms of each figure are given at the *beginning* of the film—as are the umbrellas, the coils, the condensed explosions, and the fluttering feathers. Regardless of the forms taken, the entire short is made up of two figures of contrasting colors, which are ceaselessly interacting with each other, often in conflicted and violent ways. The figures keep *suggesting* some kind of underlying form without *committing* to one.

This is true more generally of the films in which McLaren paints or scratches directly on film. In a way, these films are not abstract at all: figures are almost always recognizable icons, transforming into other recognizable things, and the speeds at which they move are deliberate and suggestive. (They do not, that is, seem to be moving at random at any given stroke, nor is their movement uniform: they speed up, they slow down.) But in a broader way, the films are *perfectly* abstract, because the suggestive features of any given figure or any given movement almost never determine the next step in the movement or transformation. It is impossible to see

the blue bird of *Blinkity Blank* as something other than a bird, when it looks and moves like a bird. But at the same time it is impossible to say that the film is “about a bird,” because the form is *only* a bird when it looks and moves like a bird; when it is not, there is nothing birdlike about it. This tension, to varying degrees, also runs through the three icons in *Hoppity Pop* (1946), the two figures in *Boogie-Doodle* (1940), and even his propaganda films like *Five for Four* (1942). Figures impact each other forcefully, only for that impact to be instantly dissolved; they walk along an implied ground, only for that ground to be eradicated; they dart on- and off-screen (implying some notion of diegetic space), only to disappear completely, reasserting their handdrawn fragility (and not some kind of power to become invisible).

McLaren’s insistence on recognizable figures and suggestive movements is not a case of half-formed formalist ambitions. Rather, such means are his methods of asserting the powers of animation, of discovering what counts as a legitimate possibility in a technique he is exploring. In this way *Spheres*, also, both is and is not abstract. Save for a paper cutout butterfly that flies in to punctuate each of the film’s segments, there is nothing lively or anthropomorphic about it. Each circle is restricted to moving at a single uniform speed. Moreover, only certain geometric *paths* of movement are allowed: they can move in a straight line or revolve. They can absorb each other or split off into smaller spheres. But even under these frictionless limitations of movement, the short betrays a particular interest in the perception of space.

The film is marked by three segments of varying backgrounds. The first part contains static dissolving backgrounds that bear *no* relation to the spheres’ movement. The second part depicts a steadily-moving background of clouds that periodically changes direction at right angles, suggesting that the spheres as a group are flying sideways at a constant rate. In the final

segment, the spheres are cast against “multiplane zooming backgrounds”⁹⁰ (of the kind found in *C’est l’aviron*), orienting the spheres into deep space. Correspondingly, the first segment offers movements that only adhere to a two-dimensional optical plane. The second segment treats its movements in a more ambiguous manner—partly by their placement on a moving background, but more tantalizingly by introducing new kinds of movements. Particularly startling, even vaguely uncomfortable, are moments when a row of spheres has apparently receded away from us by getting smaller, only to coalesce into “flat” movements in symmetrical tandem with the closer spheres. They revolve around the “closer” spheres to suggest that they had actually gotten *smaller*—only to, immediately thereafter, float *toward* the foreground once again, while the other spheres move back.

The final segment multiplies the complexities of these ambiguous movements, alternating freely between depth-based relative movements and flat-plane movements, purposely inconsistent and disorienting. Multiplane tunnels form, only to look like flat patterns of circles of variable size moving around each other. A further possibility of spatial movement is suddenly introduced near the end when four receding rows of spheres *all* move along a single apparent z-axis plane, which creates yet another ambiguity: are the spheres all making a coordinated movement in depth, or are *we* moving to look underneath them, rather than above them?

Short-term configurations of movement and figure tend to make a definable kind of sense in McLaren’s work, but such configurations do not consistently apply. Rather, they modulate in a series of Gestalt switches. At one moment, an ideograph of two dots separated by two parallel lines will look like a face: but by changing the proportions and its central principles of movement, it suddenly looks like a body. At one moment, two circles appear to move in relation

⁹⁰ McLaren, *Technical Notes*, 55.

to each other on a flat plane: but suddenly they shoot into faraway places and, without the space changing, it feels altered. Sometimes forces like gravity, inertia, and autolocomotion (i.e., intentional motion by life-forms) apply, and sometimes they do not.

Even the movements of McLaren's most celebrated, supposedly coherent allegorical film, *Neighbors*, are, at some moments, pixillated into impossible frame-by-frame caricatures: characters break into lateral slides across the grass below them, or glide freely with their knees off the ground. But at least as often, they are the real-time movements of the actors shot at reduced speed, or undistorted real-time movements. Characters break into pixillated movements without warning, and this inconsistency is essential to the comic wonder they inspire. Conversely, even the bare rigidity of one of McLaren's most abstract experiments, *Lines Vertical* (1959), uses vertical lines to create more than just vertical lines. The titular lines bounce against an invisible wall within the frame and, from seemingly random groupings, they come together in unforeseen patterns. They connect into parallel rotating planes, they trace the contours of a cylinder, they symmetrically part like curtains.

McLaren's interests as an animator do not lie in either modernist difficulty or popular appeal, but in the use of a given technique to investigate what motion "itself" looks like. McLaren holds as the basis of animated motion what we intuitively *recognize* as motion. In notes for a speech he writes:

...[I]t is the *mobile* element of the visuals that counts [in film]; it is the *motion* that speaks to us, not the image. In fact the mobile element of a film can almost always be broken down into two components, the *form* of the moving object, and the motion itself (divorced from the particular form that it is expressed through); for instance a photographed man, a cartoon man, an animal, or even a simple triangle or blob can all leap in such a way that the viewer has an impression of joy, sadness, tiredness, youth, or oldage [sic]. If examined carefully frame by frame on a motion picture strip, the various movements expressing joy will all be found to have a common characteristic; similarly

the movements of a tired leap will all have common factors of timing, tempo, acceleration, and deceleration.

So the motion can be spoken of as separate from the particular thing, shape [or] form that moves.

It is this motion that is the heart of cinema, and that makes the film (as well as the more traditional arts of dance, pantomime, theater, etc.), such a powerful medium. An international language.⁹¹

McLaren, in effect, argues that the open-ended nature of animation—the possibility of always exploring another technique—is made possible by the technical *separation* of movement from the thing moved. If one thinks of the impression of movement as an effect of vision, one can isolate the “common factors” of motion and apply those factors to anything that one can think of.

The technical separation of movement from the thing moved thus forms the methodological lynchpin *both for McLaren’s animation and for Albert Michotte’s assertion of the principles of causality as an automatic feature of vision*. McLaren’s paper circles in his *Animated Motion* series are a pedagogical tool, intended to acquaint a young animator with a basic vocabulary; Michotte’s colored squares are a psychological investigation, a way of asking questions about the nature of perception. But methodologically, both men are using an apparatus of optical illusion in aid of asserting what will count as visual motion. The bare geometry of the figures guarantees that any impression of movement and force will come only from the relations of distance and timing between figures. For Michotte, the experiments’ success proves the applicability of their results to everyday life. For McLaren, the “success” of the impression, intuited from decades of work in the medium, is so assured as to hardly make sense to be called an experiment. But in both cases, the sparseness could hardly be more significant. If these neutral shapes can call forth relations of force, absolutely anything will.

⁹¹ Quoted by Donald McWilliams in untitled article, *ASIFA Newsletter* 15.1 (1987), 1, original emphasis.

Contextually, the two cases are very different, but they manipulate the same visual variables and yield the same effect. Conceivably, we could go so far as to substitute each for the other—teaching animators Michotte’s calculations and testing subjects’ responses to McLaren’s paper circles. It seems impossible and pointless to deny that they work for the same reasons. Michotte’s research and McLaren’s art are intimately connected by an instrumental mechanics of visual motion. The convincing force of Michotte’s results and the immediacy of McLaren’s aesthetic effects are united by an isolation, an abstraction, of motion. This isolation does not by itself make Michotte’s experiments “science” or McLaren’s animated shorts “art.” But neither achievement is conceivable without it.

8. Animated automatism and the secret science

The similarity of Michotte’s experiments to McLaren’s simple pedagogical demonstration is thus far more than coincidental. The fact that the two situations produce the same effect is *as* central to Michotte’s project as a Gestalt psychologist as it is to McLaren’s project as an animator. In chapter one I argued that the guarantee that certain frame-by-frame configurations of distance will produce visual movement—a guarantee I called “animated automatism”—posits a necessary relation between the art of animation and the science of perception. There are three readily-available options for clarifying this relation: a psychologizing or cognitivist position, a (roughly) Foucauldian position, and a phenomenological position. Each of these, I will argue, is unsatisfactory, and the problem requires a fourth position, which categorizes animated motion and the study of perception as an

overlap of styles of reasoning or creation. This overlap yields an anxious set of “creeping reductions.”

First: we could agree, following Arnheim, that McLaren and Michotte have independently verified the same perceptual laws, like two scientists making the same discovery in different laboratories. This would imply that the history of animation has a fairly straightforward natural basis, and that further research into the natural bases of human perception, emotion, thought, etc., would presumably explain more and more about the various hard-wired ways that we view animation, film, and, ultimately, art. A growing tradition of cognitive film theorists follows just such a line of thinking, with recourse to newer psychology.⁹²

The problem with this position is evident from its ability to slip from Arnheim’s Gestalt psychology to evolutionary psychology, neuropsychology, cognitive neuroscience, and any other branch of the human sciences from which we may want to draw: the “discovery” of animated motion underdetermines the theory called upon to explain it. It cannot even determine what would count as a satisfying explanation for it. What does the cognitive impenetrability of the impression of causality *mean*, exactly? Does it make the laws by which the stimulus-conditions produce the impression (i.e., their relative relations of distance, time, and speed) the primary causal factors? (This is what a Gestalt psychologist would affirm.) Does it indicate the automatic processing of mechanisms underlying the direct impression, under which we have no

⁹² For example, Bordwell notes the appropriateness of J.J. Gibson’s theory of direct perception to film theory, given that he experimented with two-dimensional motion displays. See Bordwell, “Foreword,” in Anderson and Anderson, xii.

Gibson’s ecological theory of perception can be seen as a partial continuation of the Gestalt psychology project, in opposition to theorists of “indirect perception” like Irvin Rock, who maintain that perception is an internal process of question-and-answer (see Rock, *The Logic of Perception* (Cambridge: MIT Press, 1983)). Gibson considered Michotte’s style of research very close to his own (see “Preface,” EPP ix-x), and Gibson closes his major work on perception with a theory of perception in movies. See Gibson, *The Ecological Approach to Visual Perception* (Hillsdale, NJ: Lawrence Erlbaum Associates, 1986), 292-302.

control? (This is what most cognitive scientists would affirm.) Is some combination of the two needed? Do other factors, like particular neural pathways or considerations of evolutionary function, need to be taken into account? Answers will vary, and chances are that any given scientist will note the need for multiple accounts. But explanations can vary so widely and get so complicated that *what* McLaren and Michotte's shared "experiments" exactly *prove* is thrown open to question. We are left emptily claiming that the animator and the psychologist have verified the same thing without being able to specify what they verified. To be able to specify what they verified, their verifications need additional verification, in the form of more experiments and theoretical apparatuses. Such additional verification would necessarily relegate the Michotte-McLaren connection to the realm of loose anecdotal evidence.

A second, non-naturalist relation between Michotte and McLaren could be affirmed by following Jonathan Crary's mode of argument in *Techniques of the Observer*. Crary takes optical toys like the stereoscope and the phenakistoscope, early modern painting in J.M.W. Turner, and physiological studies of vision and sensation in the nineteenth century as *all* involved in a single disciplinary project of isolating, localizing, and making manageable sensory experience. The result of these disparate overlapping phenomena, Crary argues, is a dispersal of techniques for the normalization of populations; on this model, bodies of scientific knowledge are fully coincident with techniques of power. Following his example, we could assert that McLaren's studies, and the rise of animation more generally, are unsurprising continuations in modernity of what Crary calls the "obliteration of the qualitative in sensation."⁹³ Animation here

⁹³ This quote comes from Crary's assessment of Gustav Fechner, referring to Fechner's Law of sensation: "If vision previously had been conceived as an experience of *qualities* (as in Goethe's optics), it is now a question of differences in quantities, of sensory experience that is stronger or weaker. But this new valuation of perception, this obliteration of the qualitative in sensation through its arithmetical homogenization, is a crucial part of modernization." *Techniques of the Observer* (Cambridge: MIT Press, 1990), 147.

would be said to function as one more technique of measuring the body and its limits. What matters in this explanation is not the idea that our perception of motion can be reduced to a few basic principles, but the widespread modern tendency to rationalize qualitative experience. The explanation holds to a basic homology between cinematic technology and scientific techniques on a model of political control. Under this rubric, animation, like knowledge in Foucault's famous formulation, would yield not understanding but cutting.

Such an assertion, committed to historic specificity, has the benefit of not needing to commit to any scientific theory as "correct." But the mere fact that McLaren made measurements of his movements does not immediately make his practice reductive in the way the human sciences are often taken to be. If the impression of movement's repeatable stubbornness underdetermines a scientific theory of movement, it *also* underdetermines the specific qualities of any work of animation that utilizes it. Crary's own work betrays a strange disconnect between rich descriptions of strange phenomena like the stereoscope and the simplified historical work that they are made to do. He holds the sense of depth in a stereoscope, on the one hand, to be an unprecedented contradiction between planar forms and an "airless space surrounding them."⁹⁴ On the other hand, by the sheer fact of operating on the principles of David Brewster's theory of binocular vision, stereoscopes effectively *made machines* of popular users by way of their visual equipment, through nothing more than the automaticity of the impression of unreal depth in the toy.⁹⁵ Such an argument emphasizes the similarity between the

⁹⁴ Crary, 125.

⁹⁵ See Crary, 129-132. Crary's description of Turner's painting is similarly problematic; explicitly compared to Fechner, the goal would seem to be to delineate the work of both as an agglomeration of sensation. But Turner's paintings are described in commandingly holistic terms, viz.: "If the circular structure of [*Light and Color (Goethe's Theory)*—*The Morning after the Deluge*, 1843] and others of the same period mimic the shape of the sun, they also

science and the art at the expense of the immediacy and richness of the latter: it presupposes the very reductions that it sets out to demonstrate.⁹⁶

The third option, a phenomenological position, would expand on this objection to Crary, essentially denying that the specificity of McLaren's work as art or immediate experience can be considered in scientific terms at all.⁹⁷ While Merleau-Ponty absorbed many of the Gestalt arguments against empiricism and the psychology of sensation, he remained critical of

correspond with the pupil of the eye and the retinal field on which the temporal experience of an afterimage unfolds. Through the afterimage the sun is made to belong to the body, and the body in fact takes over as the source of its effects. It is perhaps in this sense that Turner's suns may be said to be self-portraits." See 139-141. Turner shares with the era's scientists an imperative to separate vision from representation, but the way he goes about it seems to exceed the manageability of the body that, according to Crary, is supposed to dominate the period.

Crary's model effectively reproduces Foucault's ambivalence between the relative autonomy of techniques of power or knowledge and the totalizing force of power/knowledge as a whole. (I am suggesting here that Beatrice Han's critique of Foucault's knowledge archaeology also applies to his power genealogy.) See Foucault, *The History of Sexuality*, vol. 1, trans. Michael Hurley (New York: Pantheon Books, 1978). If power is only the overall effect of individual mobilities of micro-powers, then bio-power, as a form of control over *life itself* (and not one or the other aspect of it) is either impossible to attain or a tautology. Either way, it cannot be a historically new form of power.

⁹⁶ Crary has been widely criticized along similar lines by others, essentially for making monolithic equivocations. See W.J.T. Mitchell, "The Pictorial Turn," in *Picture Theory: Essays on Verbal and Visual Representation* (Chicago: University of Chicago Press, 1994), 19-22; Scott Bukatman, "The Artificial Infinite: On Special Effects and the Sublime," in *Matters of Gravity: Special Effects and Supermen in the 20th Century* (Durham: Duke University Press, 2003), 83-88; and Charles Acland, "The Swift View: Tachistoscopes and the Residual Modern," in Charles Acland, ed., *Residual Media* (Minneapolis: University of Minnesota Press, 2007), 361-384.

It should be noted here that, although Crary borrows much of his narrative from Foucault, his approach is not straightforwardly Foucauldian. While Crary frequently writes as if telling a story of the rationalization of experience, Foucault regards the idea of "experience" as an ahistorical fiction and abolishes it from his work after *The History of Madness*. Foucault saw experience, as utilized by Merleau-Ponty's phenomenological project, as a mere continuation of the transcendental subject (seen earlier in Kant and Husserl) that attempted to deny how extensively history could change its notions and practices. Sentences of Crary's like, "Modernization demanded that this last retreat [of the subject as an interior domain qualitatively separated from the world] be rationalized, and as Foucault makes clear, all the sciences in the nineteenth century beginning with the prefix *psycho-* are part of this strategic appropriation of subjectivity" (148), while *quoting* Foucault, would have no place in a work by Foucault. To speak of an interior subject as a "retreat," for Foucault, makes the mistake of assuming the prior existence of a subject.

⁹⁷ I am exemplifying here only a hard-line philosophical position of phenomenology that does not apply, for example, to Dudley Andrew's call to phenomenological descriptions as an epistemologically-neutral way to describe films more closely. See "The Neglected Tradition of Phenomenology," in Bill Nichols, ed., *Movies and Methods*, vol. 2 (Berkeley: University of California Press, 1985), 625-631.

psychological methods as a whole and maintained that psychology's object-oriented explanations were fundamentally irreconcilable with the descriptive thickness of personal experience.⁹⁸ For Merleau-Ponty, art (and never science) can educate us in the latter because art is unbound from pre-existing rules in the same way that experience is. For this reason, Merleau-Ponty calls painting a "secret science"⁹⁹ that works in opposition to the "operational thinking" of traditional science.¹⁰⁰ Because "there are no separated, distinct 'problems' in painting" (depth, color, light, movement, etc., all affect each other),¹⁰¹ there is no set procedure for approaching the art. This irreducibility in painting makes it possible for our ways of seeing things to be revealed to us—any kind of isolation of one element from another would destroy the overall effect. Along this line of thinking, McLaren's work *does* have something of a "scientific" purpose: to reveal to us the means by which we see movement. But these revelations, the objection would go, can only be achieved and described through the animator's use of multiple elements (design, timing, background, color, etc.) working together. Isolations of movement-effects, under this description, do not really produce movement.

This position readily incorporates the fact that the measured distances and timings of animated motion are one tool in the animator's toolbox, approximations that make expression

⁹⁸ He criticizes Gestalt theory in particular for not following up on the philosophical implications of its descriptions. For Merleau-Ponty the uselessness of applying objective measurements to our perceptions of phenomena (i.e., the fact that length, colors, distances, etc., are relative) means that the very notion of appealing to *reasons* and *causes* of such phenomena needs to be replaced with *motives*: whole-body orientations directed toward objects in a field. For criticisms of Gestalt theory, see 47-50 and 60-61. For his objections to the applicability of any scientific understanding to psychology, see 115-124.

⁹⁹ Merleau-Ponty, "Eye and Mind," in Galen A. Johnson, ed., *The Merleau-Ponty Aesthetics Reader: Philosophy and Painting*, trans. Michael B. Smith (Evanston, IL: Northwestern University Press, 1993), 123.

¹⁰⁰ "Eye and Mind," 122.

¹⁰¹ "Eye and Mind," 148.

possible but do not determine its *content*. (In the same way we can note that Renaissance perspective was often exaggerated and eyeballed by painters, an approximation and not a direct instantiation of geometric measurement.¹⁰²) However, by drawing up such a rigid distinction between immediate experience (which is said to demand only description) and objective phenomena (which demand explanation), the position avoids the whole problem of Michotte and McLaren's overlap, which is that we can move so successfully between calculation and impression. Merleau-Ponty's own sustained attention to Gestalt illusions and aberrant psychological cases quietly reinforces this sense that in an illusion something has gone awry. He is thus forced to take various scientific findings *as* evidence without granting them the status *of* evidence. (He is, after all, relying on then-current Gestalt psychology, not digging up introspectionist reports.)

Phenomenology's ambivalence toward illusions clarifies an assumption shared by all three of these positions: that "reduction"—the kinds of laws, measurements, and mechanisms which scientific practice has at its disposal—is an all-or-nothing phenomenon. Reduction is often considered a defining difference between the sciences and the humanities. Scientists tend to justify their findings by reductive methods; humanities scholars tend to justify *their* findings by claiming that such findings are "not reducible to" others. The question of reduction is perhaps *the* major point of contention in the ongoing "culture wars." But, as I have shown in response to Arnheim's position, a reduction is only complete when it has a complete theory behind it, and no such theory is available in the human sciences. (No such example is available

¹⁰² "[T]he painters knew from experience that no technique of perspective is an exact solution and that there is no projection of the existing world which respects it in all aspects and deserves to become the fundamental law of painting. They knew that linear perspective was far from being an ultimate breakthrough; on the contrary, it opened several pathways for painting." ("Eye and Mind," 135.) See also Caroline A. Jones, "Anxiety and Elation: A Response to Michael Fried," *Critical Inquiry* 27.4 (Summer 2001), 706-715.

anywhere in an active branch of science, for one of the central criteria for success in scientific research is its ability to call for more research.) Animated motion is a particularly potent example of what Kenneth Schaffner has called (in a very different context) a *partial* reduction, or a *creeping* reduction.¹⁰³

A partial reduction occurs as an interaction between two levels of explanation, when a lower-level phenomenon is understood to play *some* role in a higher-level phenomenon but not a wholly *determinate* role. The correlation is too strong to be coincidental, but not strong enough to be a one-to-one causal relation. (An example of this would be the role of certain genes in the likelihood of developing a disease). Partial reduction is a kind of explanatory compromise, characterized by Schaffner as frequently occurring between two different fields engaged in a mutual exploration of a complex phenomenon. A partial reduction always leaves a gap in the phenomenon unaccounted for.

Partial reductions are also easily appealed to, and *necessarily* appealed to, in special cases of everyday life. They are largely what *make* the special cases special cases; partial reductions allow us to appeal to illusions as an aberrant case of perception without, in day-to-day life, being troubled by our access to the physical world. When phenomenological analysis parses off thick description from explanation, partial reduction allows it to describe the specific fullness of visual impressions in its own special way. Without knowing where the description stops, *everything* would need to be accounted for somehow. In a broader sense, partial reductions help mediate the boundaries not only between different fields of study but between specialized fields of knowledge and everyday life.

¹⁰³ See Kenneth Schaffner, "Etiological Models in Psychiatry: Reductive and Nonreductive Approaches," in Kenneth S. Kendler and Josef Parnas, eds., *Philosophical Issues in Psychiatry: Explanation, Phenomenology, and Nosology* (Baltimore: Johns Hopkins University Press, 2008), 48-98.

Schaffner also calls such phenomena *creeping* reductions, since, for scientific purposes, the gap in the explanation may also (and is often intended to) be filled in the future by some further reduction. Partial reductions can either be taken as the point where the possibility of reduction *ends*, or the point where *more* reduction *should occur*. (Hence, arguments in film studies about cognitive science are *ipso facto* arguments about the discipline's future, in a way often felt more acutely than in arguments about the validity of even such loaded topics as the relation of politics to aesthetics.¹⁰⁴) But, by the very necessity of partial reductions in establishing disciplinary boundaries, the partial reduction itself is quietly acknowledged and reinforced. And the admission of one partial reduction may always give rise to another one. Even current film scholars tend to agree that psychology still has no robust explanation for the impression of cinematic motion;¹⁰⁵ yet *no one* has taken the opportunity to deny the impression of motion as a phenomenon for psychological study. But what relation, then, does partial reduction yield regarding the histories of animation and perception?

The slippery, volatile nature of partial reduction is revealing in giving back both the aesthetic immediacy of McLaren and the calculations of Michotte *to* history. Despite cross purposes, the methods McLaren and Michotte shared a key stylistic trait. Namely, by considering the impression of movement as *separate* from the thing moved, they obtained impossible sights of motion through manipulations of distance and timing. This separation was a triumph not of theory but of style: a complex mixture of enabling assumptions and apparatus that, when combined in certain ways, simply *works*. The separation makes “true,”

¹⁰⁴ See, e.g., David Bordwell, *Figures Traced in Light: On Cinematic Staging* (Berkeley: University of California Press, 2005), 258-265, and D.N. Rodowick, “An Elegy for Theory,” *October* 122 (Fall 2007), 91-109.

¹⁰⁵ See, for example, Anderson, 61, op. cit.: an educated guess and not a conclusion derived from specific experimental research.

simultaneously, propositions about human perception *and* the central proposition of animation as an art—namely, that it is agnostic with regard to its material basis. The experiments of McLaren and Michotte create novelties which simultaneously make a partially “mechanical” nature of perception unavoidable and make a wide variety of artistic variations possible. They make an art of mechanism. They create new kinds of experiences on the basis of assured discoveries.

9. Conclusion

Animated automatism—the guarantee that certain frame-by-frame configuration of distance and timing will be seen as animate or forceful kinds of movement—carries a hidden historical weight. Not only does it weld our acknowledgment of animation as an art to an acknowledgment of the automatism of perception, it almost fuses the realms of science and art together in the exploration of animated motion. The two realms are not reducible to each other, but neither are they extricable. The give-and-take between what we might call a subjective freedom in the work of art and the brute functionality of mechanism in animated movement means that the art is never free from being intertwined with partial reduction. This, in turn, means that animation’s potential for novelty—the limitlessness of combinations of motion, the possible materials that can be made to move—is haunted by the possibility of exhaustion.

The idea of animation as a vast region of territory to be explored, an art which could always be something more than it presently is, is absolutely central to McLaren’s understanding of it (and, metonymically, to animation’s understanding of itself in the founding of ASIFA). At the end of part three of the *Animated Motion* series, after his careful demonstrations of constant

motion and acceleration, McLaren narrates over one of the series' typical A-B motion diagrams that, "by their skillful use, the animator gives life, meaning, character, and spirit to no matter what subject," effectively pointing to a sense of limitlessness. McLaren does not consider the limits of perception to be limitations. They are techniques honed to intuitive mastery which, at a certain level of skill, become enabling conditions to be freely explored in the realm of cinematic art. As if to prove his point, McLaren punctuates the phrase by animating the A-B diagram in ways we haven't seen before, using the techniques of movement just demonstrated in unforeseen combinations. Circles hit each other, chase each other, run offscreen. The A and the B, which so far functioned only as label below a straight line, become suddenly involved in the circles' world of concerns: swooping, fluttering, spinning.

But, as I've noted, McLaren was always working on the verge of boredom. Boredom was almost a positive component of McLaren's sensibility as an animator: not a bowing to the reactions of some imaginary audience, but a barometer to tell him when the formal possibilities of the limits he'd given himself had dried up, an intuited law as powerful as any perceptual threshold of movement. Within this sensibility, nothing can be discounted from being interesting in advance; possibilities must be tested out constantly, since animation is a medium whose powers can make potentially *anything* a source of visual wonder. But conversely, everything would at some point *become* boring. A film, a technique, a medium, would get boring once it stopped being informative, once one could think of nothing more to say within one's chosen vocabulary of movement. The wonder of animation was nothing other than the wonder of seeing something move for the first time that one had never thought could move in that way, and the feeling of warping the contours of one's world to fit this new fact. But such pleasures, which McLaren rightly likened to "discovery" and not "creation," are disposable; to try to *continue*

evoking such pleasures is to aim at a moving target. The endless drive toward novelty, from this perspective, is hardly distinguishable from the impossible desire to repeat the original sense of wonder at the moving apparatus.

Stanley Cavell's difficulty in theorizing animation (as opposed to cartoons), I have shown, makes apparent animated automatism's affinity for creating *sensations* rather than a world, sensations which by nature break apart our desire to *make* a world.¹⁰⁶ McLaren's medium miscegenation, parasitic upon the separability of movement and form, makes acute animated automatism's necessary commitment to perceptual "research," nearly like a science. McLaren's problem with boredom hints at a third significant quality of animated automatism, a consequence of the first two: its affinity for novelty. The next two chapters of this dissertation will address that affinity and the problems arising therefrom.

¹⁰⁶ See chapter one.

Excursus on Albert Michotte's Theory of Film

Shortly after his research on causality was published, Albert Michotte joined one of the first multipartite efforts in the world devoted to the academic study of film: the French “Filmology” movement. A brainchild of Gilbert Cohen-Séat, the movement formed a cross-disciplinary organization from such fields as psychology, sociology, and philosophy, with the goal in mind of creating a kind of superdisciplinary science of film.¹ Michotte served as the first Vice President of the International Bureau of Filmology when it was formed in 1948, and he made a select number of contributions to the society's official journal, the *Revue Internationale de Filmologie*—most notably, his theoretical piece on cinema spectatorship, “The Character of ‘Reality’ of Cinematographic Projections,” which brought to bear a number of experimental studies of perception (by Michotte himself and others) to explain the contradictory character of the film-viewing experience.

It is safe to say that the Filmology movement is considered today to be a failure; the few extant references to the movement in film studies in the English language explicitly discuss its failures. Within a few years of the movement's inception, research strayed from an original commitment to a wide-ranging study of multiple aspects of film (including aesthetic, historical, and social considerations), towards finer-grained models for experimental testing of particular

¹ The Filmology movement also produced perhaps the first doctoral dissertation on animated film, Marie-Therese Poncet's *The Aesthetics of the Animated Cartoon* in 1951. Poncet went on to publish two other studies of animation. The works remain unavailable in English, but the dissertation is discussed by Thelma Schenkel in *Exploring the Cinema of Figurative Animation*, PhD. dissertation (New York University, 1977), 17-29. See Edward Lowry, *The Filmology Movement and Film Study in France* (Ann Arbor: UMI Research Press, 1985), 55.

effects.² Filmology's influence on film studies was diffuse and indirect, coming almost entirely through the work of Christian Metz. Metz's film semiotics bridged the Filmology movement's impulse toward systematizing film with Anglo-American English and literature departments. Semiotics, as a cultural, non-experimental "science" of film, was a crucial step in the structuralist direction that film studies took in the 1970s.³

Interestingly, there has been a renewed interest in Metz's pre-semiotic, phenomenologically-oriented work, specifically his early essay, "On the Impression of Reality in the Cinema" (1965). This essay has enjoyed a resurgence of attention through Tom Gunning and Gertrud Koch, who have used Metz's claim of the phenomenal reality of cinematic movement to redefine cinematic realism. With cinema's relation to reality coming under fire from the digital revolution, Gunning and Koch use Metz's impression of reality to steer discussions of realism away from older notions of indexicality and toward a sensuously-inspired realism that allows for animation and digital manipulation.⁴ Metz's claims on cinematic movement, which form the crux of his argument for the impression of reality, are taken directly from Michotte.

² See Lowry, 125-156, and Dudley Andrew, "The Core and Flow of Film Studies," *Critical Inquiry* 35.4 (Summer 2009), 888-896.

³ See Lowry, 163-170 and Andrew, 896-900.

⁴ See Tom Gunning, "Moving Away from the Index: Cinema and the Impression of Reality," *differences* 18.1 (2007), 29-52; Gertrud Koch, "Carnivore or Chameleon: The Fate of Cinema Studies," *Critical Inquiry* 35.4 (Summer 2009), 918-928. While Gunning and Koch differ in a number of interesting theoretical ways, they share a belief, following Metz, in the phenomenal reality of movement that can undergird a unique experience of the moving image that persists through the shift from analog photography to digital representation (retroactively including animation).

Gunning likens Metz's remarks on movement to Bergson's insistence on movement as always re-created in the present tense, never giving rise to a mere representation of a movement but *another real* movement. Movement's present-tense quality is said to demand a participation in it, yielding kinesthetic effects that can make classical narratives, cartoons, and abstract rhythms of images all feel "real." Koch builds on Metz's remarks to emphasize the primacy of *illusion* (which she calls the "*aesthetic*" quality of film as such that exists prior to any differentiated content), citing Deleuze's rebuttal to Bergson's dismissal of cinematic movement to argue that acknowledging illusion constitutes an "immediate given" which poeticizes space and time by manipulating its contours. The difference in emphasis is subtle, and would require much more elaboration than the scope of this

Thus, Michotte's work, in a secondhand way, has become central to present-day thinking about cinematic motion; his account of motion has indirectly been used to expand the idea of film to include animation. Yet, Michotte's original paper explicitly *denies* any ability of animation to partake in the impression of reality. Did Michotte miss the significance of his own research? How could his account of motion in cinema be utilized to include animation while itself excluding it?

Answering this question requires connecting the particular observations and arguments of Michotte's "reality" essay to the experimental work from which the essay draws. Michotte's notion of an impression of reality is an extension of an interest that he took more generally in what he called the "phenomenal reality" of certain images. Although work in this area was originally inspired by the motion-effects he had obtained in his experiments on causality, *phenomenal reality* is not quite the same as the *phenomenally real perception of movement* which had played such a crucial role in his causality work. The difference is small but important, and it amounts to a different kind of realism than the kind that Metz would eventually endorse. Michotte's notion of the cinematic impression of reality, excluding animation, was ultimately driven by *different intuitions* about what the experience of cinema was like—intuitions that Metz would revise. Michotte's experiments were seen by Michotte himself as having only partial relevance to the phenomenology of cinema; Metz, wanting to incorporate fantasy and special effects into that phenomenology, would make the experiments of paramount importance.

project allows for. Suffice it to say that both these scholars are defining film in terms of a *phenomenological experience of movement*, which puts a new importance on how that experience is described and accounted for.

The Perception of Causality makes a brief reference to the perception of movement in cinema, treating it as an example analogous to everyday life in that the impression of the functional relations among screen-objects is directly perceived—even though the *objects* that are moving on a screen are mere representations of things.⁵ This example, underscoring the oft-cited point in Gestalt psychology that perception in general is unmediated, echoes Michotte’s insistence on the integrity and applicability of his experimental display, the disc method, to everyday life. Since the disc method portrays integral functional relations between the flat squares, the impression of causality occurs as readily in the squares as it does in watching a knife cutting bread. As long as the Gestalt features of the actions hold, the relations will be phenomenally identical, whether physically real or abstracted. This insight, for Michotte, was confirmed by the language with which test subjects would frequently describe the causal relations:

[Subjects] had the impression that the impact between the objects was real (in the physical sense), rather than just a mere representation of such a collision. Yet, of course they were aware of the technique employed and therefore knew that it only involved an optical illusion.⁶

These responses piqued Michotte’s interest, prompting an investigation into whether or not the quality of “reality” in a perception may itself have a definite, experimentally verifiable character.

In an essay published two years later, “The Psychological Enigma of Perspective in Outline Pictures,” he answers in the affirmative. The essay is an investigation of the

⁵ “[At the cinema] the phenomenal causality of movement is directly experienced as such, even though cinema is a visual representation of things like painting is..” See Michotte, *The Perception of Causality*, trans. T.R. Miles and Elaine Miles (New York: Methuen, 1963), hereafter PC, 21.

⁶ Albert Michotte, “Autobiography of Professor A. Michotte van den Berck,” trans. Alan Costall, collected in Alan Costall, George Butterworth, and Georges Thines, eds., *Albert Michotte’s Experimental Phenomenology of Perception* (hereafter EPP, Hillsdale, NJ: Lawrence Erlbaum Associates, 1991), 43-44.

contradictory impression of depth in perspective pictures, wherein we *see* depth directly in the pictures (a geometric drawing of a cube is immediately seen to possess three dimensions in a way that slightly-altered arrangements of lines and angles are not), but the depth is seen as *unreal* (the cube's three-dimensionality does not make us try to pick it up off a page). Michotte argues that certain three-dimensional representations can, under certain experimental conditions, take on a character of "reality." For Michotte's experimental purposes, he defines "reality" as "an empirical characteristic, the potential for being manipulated;" three-dimensionality is "another empirical characteristic, the capacity for being matched to the volume of a substantial object."⁷ The import of this distinction lies in an experiment wherein test subjects were asked to manipulate a wire parallelepiped so that it matched a perspective drawing. Subjects matched the depth of the wire figure to fit the impression of the line drawing without difficulty, proving that depth was perceived in the same way for the real and drawn objects; yet no one mistook the drawing for a manipulable thing, proving by concomitant variation that *manipulability* (or "reality") was perceived differently than *depth*.

Michotte strengthens his case by discussing two related experiments. In one experiment, the shadow of a wire parallelepiped can be cast upon a screen so as to make the shadow indistinguishable from a line drawing; but if the parallelepiped rotates, "the movements of the shadow become 'detached' from the screen and the cube takes on a heightened character of reality."⁸ The black lines of the shadow no longer seem bound to the surface of the screen, but take on an independent existence of their own. Similarly: when a pair of lines drawn on a flat

⁷ See Michotte, "The Psychological Enigma of Perspective in Outline Pictures," EPP 181.

⁸ "Enigma," 182. Michotte tellingly adds: "Incidentally, the effect of movement is one of the factors that accounts for the aspect of 'reality' normally possessed by objects portrayed in films, produced physically by the effect of a rather complicated pattern of shadows."

surface is looked at from a particular angle, the lines “become detached and take on the appearance of needles sticking out of the paper.”⁹ This effect is so intense that, if an observer is shown a geometric line drawing at the proper angle and given a rod to stick through the flat “figure,”

the observer does not hesitate to try [to stick the rod through the figure] and is extremely astonished to find that the rod hits the paper and slides along its surface above the object! The manipulation test is quite clear, for the observer knows perfectly well that the perceived object is unreal yet he acts as if in the presence of a tangible object.¹⁰

Moreover, the effect can occur in varying degrees, depending on the angle at which the figure is shown. These findings lead Michotte to conclude that “the character of reality should be considered as a primitive and original dimension of phenomena,” in the same way that movement, shape, and color are taken to be: reality, for Michotte, is not a judgment attached to various perceptions but a phenomenal aspect of perception itself.¹¹ The *unreal* depth of a perspective drawing, Michotte claims, results from incidental factors that contradict what would otherwise be an impression of reality (such as the effects of binocular vision and the texture of the drawn lines).

It is this notion of reality—*manipulability*, related to but not identical with factors of depth, movement, etc.—that Michotte finds relevant to the cinema. His Filmology essay, “The Character of ‘Reality’ of Cinematographic Projections,” attempts to solve a problem similar to the contradiction of perspective in drawings but at a higher pitch: given the “very vivid impression of the reality of the things and events perceived” in a motion picture, a matter which

⁹ “Enigma,” 183.

¹⁰ “Enigma,” 184.

¹¹ “Enigma,” 184-185.

Michotte takes for granted, why do spectators not respond to the screen as if it were truly real (screaming or fleeing, attempting to help the protagonists, etc.)?¹²

Michotte's answer is that the cinema gives a peculiar *kind* of reality to its viewer (hence the scare-quotes in the title): reality at a psychological distance from us. The paper is structured in three parts. The first part details the various visual anomalies of cinema that don't match everyday perception. These factors include the nature of scene changes and fades, which create and annihilate whole views rather than appearing to merely occlude them; the inverse roles that light and shadow take on (onscreen the darkened areas define the objects, whereas in real life shadows are subservient to their objects); and the segregation of spaces between the audience and the actors.¹³

The second part argues for three factors of the cinematographic display which *encourage* an impression of reality. Citing the same wire-shadow experiment used in his perspective essay, Michotte claims that when figures move autonomously on the screen, they become detached from the screen and take on their own independent existence. Moreover, *movement*, unlike volume, always retains a character of reality, "whether it involves the displacement of material objects or of elements of an image or figure, as in Wertheimer's famous experiment. The same

¹² Michotte, "Character," 197. This question is familiar both from a vantage point of film studies, in which the power of the screen in the "train effect" of early cinema was purported to have *actually* sent the first film audiences fleeing from the screen, and from a vantage point of aesthetics, as a variation of the paradox of fiction. For more on the significance of the train effect, see Tom Gunning, "An Aesthetic of Astonishment: Early Film and the (In)Credulous Spectator" in Linda Williams, ed., *Viewing Positions: Ways of Seeing Film* (Rutgers: Rutgers University Press, 1995), 114-133; James Lastra, *Sound Technology and the American Cinema: Perception, Representation, Modernity* (New York: Columbia University Press 2000); and Stephen Bottomore, "The Panicking Audience?: Early Cinema and the 'Train Effect,'" *Historical Journal of Film, Radio, and Television* 19.2 (1999). For more on the paradox of fiction see Kendall Walton, *Mimesis as Make-Believe: on the Foundation of the Representational Arts* (Cambridge: Harvard University Press, 1990), and Noel Carroll, *The Philosophy of Horror, or Paradoxes of the Heart* (New York: Routledge, 1990).

¹³ See "Character," 200-204.

peculiarity occurs in the case of actions and all functional relations in general.”¹⁴ In other words, artificial displays (such as those in Wertheimer’s stroboscopic experiments and in Michotte’s own causality experiments) will produce impressions that nonetheless seem real. Further, movies generate empathic emotions for characters *through* their visual displays. All of these factors contribute, contrary to the previously-cited problems, to a strong feeling of reality.

In the third part of the essay, Michotte concludes that movies yield a contradictory experience—an impression not of reality, but of “reality.” An integral perception of reality undermines the viewer’s previous experience of reality in everyday life, which carries various protocols for interaction. At the movies, one gets a picture of reality that cannot be interacted with: perceptual cues that *should* arouse particular kinds of action but whose untouchability make any action upon them impossible. What we get, for Michotte, is “an impression of distance,” a sense of reality without the correlate of immediacy. The notion of psychological distance is a *social* phenomenon, not a perceptual one; thus the strangely vivid yet attenuated experience of film-watching.¹⁵

The complexity of this phenomenon—comprising a *perceptual* dimension of reality-as-manipulability, as well as a *social* dimension of reality-as-manipulability—gives some hint as to why Michotte would disqualify animated film from this impression. Twice he refers to cartoons, to qualify his notion of cinematographic reality as non-applicable to them. Even as he notes the possibility that the “intrinsic reality” of movements “serve[s] to enhance considerably the

¹⁴ “Character,” 206.

¹⁵ “Character,” 208-209. Michotte borrows the notion of psychological distance from the action psychology of Kurt Lewin and the pathology studies of Pierre Janet. The idea of film spectatorship as reality-at-a-distance comes remarkably close to the theory of Stanley Cavell. See Cavell, *The World Viewed* (Cambridge: Harvard University Press, 1979), 26.

character of reality of the things [moving],” he includes a footnote claiming that it would be useful to compare “ordinary cinematographic films and animated cartoons in this respect, since *the apparent reality of the represented objects is certainly diminished, if not entirely absent in the second case.*”¹⁶ No argument is given for this distinction, and little space is spent on clarifying its implications. For Michotte, the basic difference of experience between cartoons and movies is immediate and intuitive. It doesn’t *need* to be explained, only clarified. There is *as* little doubt here “that a motion picture provides...a very vivid impression of...reality” that “exceeds that achieved in any of the other plastic arts”¹⁷ as there is that “[a]nimated films are, of course, a different matter.”¹⁸

Michotte offers three options for why this may be, but the option that seems to best match Michotte’s intuition about the illness-of-fit between animation and reality is that cartoons might offer “a greater degree of psychological distance.” *Reality* is defined by Michotte as the potential for manipulability or interaction, and cinematographic reality is a distanced version of that reality. The potentials for action in cinematographic reality are still *clear*, but not *possible*, as if the reality being held behind a veil. By contrast: the presentation of a cartoon deals with *recognizable* actions and emotions but leaves the nature of their manipulability vague and perplexing. One can imagine *saying* things to Bugs Bunny, but can one imagine standing face-to-face with him, without undoing some very basic assumptions about the contours of one’s body? Would a spectator flatten out if on the other side of the screen, eyes and mouth exaggerated? If touched, is it at all clear what Bugs would feel like?

¹⁶ “Character,” 207N8, emphasis added. Subsequent quotations are taken from the same passage until otherwise noted.

¹⁷ “Character,” 197.

¹⁸ “Character,” 197N2.

Michotte does not attempt to answer any of these questions. But it is clear that the implications of a *distanced* reality (wherein one could make a difference in the actions, if only one were in the other space) break down when the presentation is so overtly artificial. Cartoons were *too much* like the isolated abstractions of his experiments to count as reality, or even as “reality.” The primary reaction to the experiments was astonishment: an incongruity, an immediate violation of expectations. The primary mode of film-watching, for Michotte, was involvement: loss of medium-awareness, empathy, vividness, completeness. This difference more or less accords with the long-held distinction in classical film theory between live-action feature films and cartoons.¹⁹

How, then, is Metz able to use Michotte’s work, over a dozen years later in his own theory, to partly *efface* this distinction? Essentially, Metz swaps out the criterion of manipulability for the phenomenal reality of movement. For Metz, the popularity of the movies can be attributed almost entirely to their convincingness, their ability to construct a far stronger impression of reality than that of any other art. This “feeling of credibility,”²⁰ (as Metz calls it) is attributed to a contradictory presentation, and both sides of the contradiction rely heavily on Michotte. On the one hand, cinema affords a greater degree of reality than photography, due to, as per Michotte, the phenomenal reality of its movement. Yet that reality is placed at an unbreachable degree of separation from our own physical space; the detached display of the screen creates, as per Michotte, a segregation of spaces. Metz keeps the contradictory nature of these factors in play, but significantly revises Michotte to make them mutually reinforcing agents in a dialectic that paradoxically *frees* cinema from strict boundaries of physical reality. For

¹⁹ For more on this difference, see chapter one.

²⁰ See Christian Metz, “On the Impression of Reality in the Cinema,” in *Film Language: A Semiotics of the Cinema*, trans. Michael Taylor (New York: Oxford University Press, 1974), 3.

Metz, the segregation of spaces makes the incredible credible. It puts the unreal on the same ontological plane as the real, making imaginative fantasy just as “cinematic” as something like

Italian Neorealism:

Fantastic art is fantastic only as it convinces (otherwise it is merely ridiculous), and the power of unreality in film derives from the fact that the unreal seems to have been realized, unfolding before our eyes as if it were the flow of common occurrence—not the plausible illustration of some extraordinary process only conceived in the mind. ... The fantastic creatures of *King Kong* were drawn, but the drawings were then filmed, and that is where, for us, the problem begins.²¹

Note first that this is not a head-on approach to animation, in the way that Michotte took to be a denial of cartoons as real (and in a way that Gunning later takes to be a confirmation of the same). Metz is dealing with a limit case of feature-length narrative film: a fantasy *genre*, performed with instances of visual *effects*. He seems to deliberately avoid pressing the issue too far; *King Kong* allows him to take certain instances of drawings or models to be convincing in the same basic way as live actors without having to take a whole world of drawings to be convincing. But in order to even go as far as he does, to make the segregation of spaces work in a way that positively contributes to the reality of a cinematic image, Metz needs to alter the criteria of reality. Sheer convincingness or credibility subtly takes the place of the potential for interaction or manipulability.

Visual movement is given relatively little discussion in Michotte’s essay, one contributing factor among many to an overall impression. In Metz, the importance of visual movement becomes the single most important factor. Metz includes a discussion of Michotte’s experiments in causality, whose observers “never doubt, even for an instant, that the motions

²¹ Metz, 5.

they perceive are real.”²² For Metz, these observations demonstrate “a general law of psychology that movement is always perceived as real—unlike many other visual structures, such as volume, which is often very readily perceived as unreal (for example, in perspective drawings).”²³ This claim is not tempered by other factors (which had led Michotte to additionally define reality as manipulability). Instead it is bolstered by an observation that Michotte himself had failed to make: that *there is no manipulability test for movement*:

Movement is insubstantial. We see it, but it cannot be touched, which is why it cannot encompass two degrees of phenomenal reality, the “real” and the copy. Very often we experience the representation of objects as *reproductions* by implicit reference to tactility, the supreme arbiter of “reality”—the “real” being ineluctably confused with the tangible... The strict distinction between object and copy, however, dissolves on the threshold of motion. Because movement is never material but is *always* visual, to reproduce its appearance is to duplicate its reality.²⁴

Emphasizing this point downplays the lack of manipulability that Michotte seems to have viewed as a hindrance to the reality of nonphotographic movement. Because it is in the very nature of visual motion to not be manipulable, it can be applied to all manner of nonmanipulable things. Making the figures in *King Kong* move makes them real without necessarily raising the question of possible interaction.

In this way, Metz does not really argue for the importance of animation *per se*, but brings special visual effects under a broader aegis of cinematic realism or convincingness. Cartoons are still not yet movies, but they share a fundamental component of phenomenal reality in their capacity for movement, such that one might become the other.

²² Metz, 8.

²³ Metz, 8.

²⁴ Metz, 8-9, original emphasis.

Chapter Three

Master Ingenuity: Rollin Lynde Hartt and Vachel Lindsay

on the Novelty of Illusion

1. Introduction

This chapter examines a moment of what we might call early animation theory or proto-animation theory in order to argue that the problematic of animated motion has important roots in discourses on trickfilms in the early twentieth century. The place of “animation” in the first twenty years of cinema has recently become a question of great interest; this has come with the territory of the large-scale shift from indexical to digital representation that has made cinema start to look more like animation. While scholars have long known that films were called “animated pictures” before they were called “movies” and that Emile Reynaud’s projected moving drawings predate the photographic apparatuses of Edison and the Lumières, these facts are acquiring a new kind of significance. The primary question driving new research into these matters goes roughly like: if movies are now inseparable from animation, might moving pictures have been animation before they were movies?

Variations of this question have proven enormously useful for unearthing new historical facts, but such facts have turned out to be surprisingly unhelpful in settling where and when exactly “animation” begins. “Animated cartoons” was not available as a category of generic organization until the mid-1910s; yet various instances of practices we would be inclined to call animation today—namely, stop-motion tricks—were present almost from cinema’s beginnings, and long before then, optical toys were utilizing the same basic mechanics of vision to create

motion with no need for photography.¹ Whether or not one wants to call any or all of these examples of animation depends entirely on how one wants to define animation. As André Gaudreault and Philippe Gauthier have eloquently argued, there is nothing, strictly speaking, to keep us from calling the pre-1910s examples “animation” if we so desire.² Conversely, as Donald Crafton has argued with equal eloquence, there is nothing in the historical record to indicate that the filmmakers and audiences of the period would have called such examples “animation” as we use the term today, and therefore no real historical reason to apply the term.³ One gets the sense that something has gone wrong here.⁴

¹ See Kristin Thompson, “Implications of the Cel Animation Technique,” in Teresa De Lauretis and Stephen Heath, eds., *The Cinematic Apparatus* (New York: St. Martin’s Press, 1980), 106-107.

² See André Gaudreault and Philippe Gauthier, “Special Issue: Could Kinematography be Animation and Animation Kinematography?” *animation: an interdisciplinary journal* 6.2 (July 2011), 85-91. Similarly, Andrew Johnston uses Kristin Thompson’s point that “the term ‘animated film’ meant not just cartoons but any motion picture film” (106) to claim that a boundary between animation and film did not originally exist and that, therefore, “*cinema was animation.*” See Johnston, *Pulses of Abstraction: Episodes from a History of Animation*, PhD. dissertation (University of Chicago, 2011), 11, original emphasis.

³ See Donald Crafton, “The Veiled Genealogies of Animation and Cinema,” *animation: an interdisciplinary journal* 6.2 (July 2011), 93-110.

⁴ This sense, I believe, is clearest in the ongoing debate between Donald Crafton and Alan Cholodenko about how widely applicable the term “animation” is. Crafton maintains that the term most clearly connotes a particular genre of film that was only recognizable after Emile Cohl and Winsor McCay; other uses of the term, referring to either pre-cartoon frame-by-frame manipulations or to the more general association of the term with life or liveliness, may have a speculative or hermeneutic value, but threaten to blur together important historical distinctions. Cholodenko argues that *all* cinema is animation, that cinema has never *not* been animation, and that animation both supersedes and predates cinema. See Cholodenko, in “The Animation of Cinema,” *The Semiotic Review of Books* 18.2 (2008), 1-10.

The disagreement centers most strongly around the place of Emile Reynaud in film and animation history. Cholodenko is essentially rebutting Donald Crafton’s claims about the lack of importance of Emile Reynaud for film and animation history; see Crafton, *Before Mickey: The Animated Film, 1898-1928* (Cambridge: MIT Press, 1982), 6-7. Crafton’s “Genealogies” spends much of its space rebutting Cholodenko. The difference of interpretation is based on such matters as whether Reynaud should get credit for being the *first* example of putting motion pictures on a celluloid strip or the lack of available evidence for his direct influence on early cinema history makes him a footnote, and what Reynaud meant when he used the word “animated” in describing his shows. The two are simply talking past each other: Cholodenko’s idea of animation is not a matter of “evidence” at all (in terms of direct historical verification), but of a *concept* of animatedness that crops up in a number of places and has its own nonhistorical logic. Crafton’s idea of animation is *nothing but* historical evidence; to name a phenomenon

I maintain that what has gone wrong—not in the validity of the research but in the underlying tenor of the way the term “animation” is used in the various debates—is that the question of whether or not a given case qualifies as animation has been pursued to excess, at the expense of what might make animation *matter* (in a broader sense). In almost every case, the focus remains on a set of examples (a magic lantern, the praxinoscope, *Fantasmagorie* (Emile Cohl, 1908), etc.), a set of circulating terms (“animated pictures,” “animatograph,” “animated cartoons,” etc.), or some combination of the two. Remaining at this level of analysis still leaves one without a clear idea of what import the matters have for the study of film more generally, unless one is already committed to the importance of animation.⁵ Because animation is so variably defined, it remains unclear what historical, philosophical, or political *issues* are forced by it, other than the nebulous point that film studies should pay more attention to animation.

This chapter will approach the idea of animation as applied to early film history from a somewhat oblique angle. Instead of arguing that something like animation practice exists at the beginnings of film, I argue that something like a *problematic* of animated motion exists at the origins of film *theory*. Two of cinema’s earliest sustained critics, I will demonstrate, held that self-conscious presentations of the illusion of motion—frame-by-frame acknowledgments of the apparatus that first became popular with trickfilms and then became a central guiding principle for cartoons—were of central importance to the motion picture’s role in modern cultural life.

At the same time, these two authors disagreed profoundly over what exactly the importance of filmtricks was. Though these two never engaged in a direct argument, their very

“animation” before it has already been named as such, for Crafton, is to risk forgetting its original, non-animation function.

⁵ Dudley Andrew, for instance, has remained firmly committed to cinema’s unique power as a realistic art. See Andrew, *What Cinema Is!: Bazin’s Quest and Its Charge* (Malden, MA: Wiley-Blackwell, 2010), 42.

difference of assumptions, styles, and values form an implicit theoretical debate over the nature of cinema. The terms of this debate are not dictated by the role of the photographic apparatus in the production of art, as was the general matter of contention in early film criticism. Rather, the debate centers around the importance of *artificial* motions: how they are best utilized, how to best view them, and how they might affect their viewers.

That is, I uncover not an early history of animation in film, but an overlooked episode in the history of why (something like) animation was thought to *matter* for film. Typically, “film theory” is thought to begin in America with two books: Vachel Lindsay’s *The Art of the Moving Picture* (1915) and Hugo Munsterberg’s *The Photoplay: A Psychological Study* (1916), which collectively argue that film is a new artform with its own properties. My own study will compare Lindsay’s book to an earlier work, Rollin Lynde Hartt’s *The People at Play* (1909)—a long-form essay on multiple popular amusements that holds film in particularly high esteem.

Comparing the theories of Hartt and Lindsay allows a different kind of story about early film to emerge, a story in which filmtricks were seen to have a potentially game-changing role in a new form of entertainment with an uncertain future. Unlike Munsterberg, who quickly dismissed trick-effects as essentially belonging to an age before the movies (and thus unnecessary to the cinematic quality of movies),⁶ Hartt and Lindsay found a certain drama in the filmtrick’s presentation of illusion itself, and that drama was felt to have profound consequences for its audience in a newly modern America.

⁶ See Hugo Munsterberg in Allan Langdale, ed., *Munsterberg on Film: The Photoplay: A Psychological Study, and Other Essays* (New York: Routledge, 2002), 61-62. Munsterberg’s idea of cinematic specificity is much closer to that currently held by film studies than is found in Lindsay’s account, because Munsterberg focuses almost exclusively on the formal vocabulary of the feature-length narrative film: close-ups, editing, and so on. For Munsterberg, the cinema finds its uniqueness in various techniques that literalize mental processes; trickfilms, he maintains, were an amusing extension of stage tricks but a dead-end for cinematic language. Cinema proper begins with the close-up.

Hartt's early career was as a Congregationalist minister, and he wrote for various popular magazines from the turn of the century onward. In *The People at Play* (one of the first book-length studies of mass culture), he argues that nearly every form of lower-class amusement, from the dime museum to the burlesque house, is culturally bankrupt. Moving pictures are a commanding exception to this rule. In particular, Hartt argues that filmtricks, through their characteristically comic acknowledgments of their own fakery, could make a positive intervention in what we might call a politics of humbug.⁷ Humbug—the swindling of those who should know better by those who know better—was everywhere in turn-of-the-century mass culture; for Hartt, the ubiquity of humbug posed a serious threat to America's future. Filmtricks held major value for Hartt by enacting a kind of training, at the sensory level, to not be taken in by false appearances.

Lindsay published his celebration of the movies shortly after gaining fame as a poet-of-the-people. Filmtricks hold a crucial place in Lindsay's defense of film as a populist art, for reasons at odds with those expounded by Hartt. Lindsay saw turn-of-the-century America as in danger of being overrun by the conveniences and incremental advances of the applied sciences, which were subtly training the populace to dull their ability to dream of a better future for themselves. The trick effects of moving pictures, for Lindsay, offered paradoxical immediacies which had the potential to function as religious visions, using the sights *given* by the technology to defeat its own technological basis.

Thus, two writers find filmtricks to be extraordinarily valuable: one toward the remedy of a society which believes in too much, and the other toward the remedy of a society which believes in too little. In both cases, a salient feature of film is taken to be capable of social

⁷ For more on this phenomenon see Neil Harris, *Humbug: The Art of P.T. Barnum* (Boston and Toronto: Little Brown and Company, 1973). Fittingly, Hartt refers frequently to P.T. Barnum as a master of humbug.

criticism. To properly bring out the diverging natures of these claims—that is, to detail *why* and *how* Hartt and Lindsay came to value these tricks—it is necessary to place their film theories in context with their other writings. The complexity of these thinkers requires building up a careful picture of their backgrounds, writing styles, and concerns, over multiple written works. This means that I will spend precious little space discussing the actual practices or audiences of filmtricks or early cartoons, only as much as is necessary to contextualize the writings.

One might therefore object to my particular approach as letting film itself drop away from analysis, a work of mere theory that forgets the object it is trying to theorize. Such a worry is, I believe, unfounded, for two reasons. First, it is readily accepted that close analyses of particular theoretical claims and concerns are valuable for major film theorists like Bazin, Eisenstein, and Munsterberg. Part of my point here is that Hartt and Lindsay *are* major film theorists, not perfunctory historical landmarks for the various states of early cinema, and the only way to make such a case is by demonstrating their complexity. Hartt's study of moving pictures, when it is mentioned at all, is only considered as part of a larger journalistic context of nickelodeon-era cinema;⁸ the lack of attention to Lindsay's other writings has led to a widely-held misunderstanding and dismissal of his work.⁹ Second, as I have already noted, it is not the

⁸ The only mentions of Hartt I have found are in histories of early cinema, often taken with other popular critics to elucidate some broad popular assumptions. See Jan Olsson, *Los Angeles before Hollywood: Journalism and American Film Culture, 1905 to 1915* (Stockholm: National Library of Sweden, 2008), 53-55; see also Richard Abel, *The Red Rooster Scare: Making Cinema American, 1900-1910* (Berkeley: University of California Press, 1999), 204N83.

⁹ While being recognized as the author of the first major book of film theory in America, Lindsay is almost always at the same time considered tangential to the recognizable concerns around film. One can see this disavowal in action in a casual aside by Dana Polan: "[V]irtually any official historical account [of film studies] by today's practitioners will predictably cite as a disciplinary antecedent the poetic and often wacky ramblings of the folk poet Vachel Lindsay..." At one stroke, Lindsay is historically acknowledged and theoretically evacuated. See Polan, *Scenes of Instruction: The Beginnings of the U.S. Study of Film* (Berkeley: University of California Press, 2007), 19. See also Allan Langdale, "Editor's Introduction," in Langdale, ed., *Hugo Munsterberg on Film: The Photoplay: A Psychological Study and Other Writings* (New York: Routledge, 2002), 35N48. This, I maintain, is due to a lack of

historically-specific *practice* of animation in this period that has been neglected; what's lacking is an idea of historically-specific *theory around it*. Without some theoretical headway, animation can mean everything and nothing. By locating a moment in the problematic of animated motion, animation can mean *something*.

This is to say that the conflict between Hartt and Lindsay allows a piece of the problematic of animated motion to come to light. Their conflict represents a basic ambivalence about how to view a visual illusion that would later play a key role in plasmatic accounts of cartoons, which take the illusion for granted as a scientific fact while using its results to resist the very cultural conditions which produced that fact. When figurative animation begins to push against the pull of cartoons, the terms get reversed: the illusion is made significant again, to regain its sensory wonder. It is not accidental that institutions of and advocates for figurative animation often sought to wrest the form away from Disney by reclaiming Emile Cohl and Winsor McCay, renewing the spirit of novelty in the impression of animated motion.¹⁰

This novelty is, in part, borne of a tension between perception and explanation. The ease with which we accept animated motion as an optical illusion has its roots in the originary discourse around cinema itself, and, before then, in the popular circulations of illusions: magic

understanding of Lindsay's non-film writings, and it is only against those writings that a clear understanding of his theory is possible. For an exception to this, see Myron Lounsbury's commentary in Vachel Lindsay, ed. by Lounsbury, *Progress and Poetry of the Movies: A Second Book of Film Criticism* (Lanham, MD: Scarecrow Press, 1995). Lawrence Goldstein analyzes Lindsay's movie-star poems but does not cover the concerns of his film theory; see Goldstein, *The American Poet at the Movies: A Critical History* (Ann Arbor: University of Michigan Press, 1994), 19-38.

In this regard I am profoundly indebted to Beth Corzo-Duchardt. Her as-yet-unpublished work on Lindsay's primitivism in his poetry and film theory demonstrated the acute and problematic richness of his writing, and much of the present chapter has only been possible in light of her work.

¹⁰ See André Martin, "Animated Cinema: The Way Forward," *Sight and Sound*, 28.2 (1959), 80-85; George Griffin, "Cartoon, Anti-Cartoon," in Gerald Peary and Danny Peary, eds., *The American Animated Cartoon: A Critical Anthology* (New York: Dutton, 1980), 261-268; and Robert Russett and Cecile Starr, eds., *Experimental Animation: Revised Edition* (New York: Da Capo, 1988), 32.

tricks, illustrations in popular magazines, optical toys, and a host of other practices.¹¹ Strictly speaking, the impression of animated motion does not in itself offer any structure of explanation—only a strange sight intuitively recognized as anomalous and *in need of* some explanation, a paradoxical immediacy. The paradox can be solved by either appealing to scientific observations about perception, shuttling it into a domain of modern expertise, or by some occult explanation; indeed, Kierkegaard *defines* a religious revelation as a “paradoxical immediacy,” a phenomenon qualitatively different from everyday life.¹² The conflict between Hartt and Lindsay trades on this very ambiguity. The ambiguity cannot be settled by perception alone. It requires an entire surrounding world to make sense of it (even as the impression sends ripples through that world).

2. Rollin Lynde Hartt on popular amusements and the Neolithic mentality

Rollin Lynde Hartt’s *The People at Play* was not the only nickelodeon-era effort to value moving pictures above other cheap means of entertainment,¹³ but the book was unique in its level

¹¹ See Tom Gunning, “An Aesthetic of Astonishment: Early Film and the (In)Credulous Spectator” in Linda Williams, ed., *Viewing Positions: Ways of Seeing Film* (Rutgers: Rutgers University Press, 1995), 114-133, and “Primitive Cinema: a Frame-Up? or, the Trick’s on Us,” *Cinema Journal* 28.2 (Winter 1989), 3-12; James Lastra, *Sound Technology and the American Cinema*, 16-60; Jonathan Crary, *Techniques of the Observer* (Cambridge: MIT Press, 1991), 97-136. Matthew Solomon, *Disappearing Tricks: Silent Film, Houdini, and the New Magic of the Twentieth Century* (Urbana: University of Illinois Press, 2010); and Simon During, *Modern Enchantments: The Cultural Power of Secular Magic* (Cambridge: Harvard University Press, 2002).

¹² Søren Kierkegaard, *On Authority and Revelation: The Book on Adler, or a Cycle of Ethico-Religious Essays*, trans. Walter Lowrie (Princeton: Princeton University Press, 1955), 47.

¹³ Constance Balides notes a broader trend of cultural authorities who embraced nickel theaters as wholesome alternatives to other lower-class thrills. See “Cinema under the Sign of Money: Commercialized Leisure, Economies of Abundance, and Pecuniary Madness, 1905-1915,” in Charlie Keil and Shelley Stamp, eds., *American*

of essayistic detail devoted to a wide variety of such amusements, and Hartt's celebration of cinema is articulated in comparison to the others he covers. Collected as a series of personal observations and anecdotes (originally published in the *Atlantic*), the book paints a composite picture of America's rising mass culture over eight subjects: burlesque, amusement parks, dime museums, motion pictures, "society" courtship etiquette, correspondence art schools, and the baseball park. The implicit quasi-sociological conceit of the study is that some idea of the mentality of the people themselves may be drawn from analyzing that which amuses them.

While Hartt makes no attempt at a unifying thesis or systematic explanations of behavior, a number of themes recur throughout the amusements he chronicles, in an authorial style consistent with his other turn-of-the-century middlebrow magazine publications. The themes and style are best encapsulated by his remarks in the melodrama chapter, on the production *His Terrible Secret; or, the Man Monkey*. The play concerns Melmoth, a man cursed with the face and body of an ape due to a gorilla having frightened his mother while she was pregnant.¹⁴ Hartt describes the play as follows:

Melmoth's [the Man Monkey] father, it appears, was erroneously believed to have been strangled by a gorilla. Consequently, Melmoth resembles an ape. Mr. Charles E. Blaney, who made that shilling-shocker, is too honest to claim originality; he confesses that his plot is "based on Darwin's theory of evolution." Obviously, for Melmoth cherishes a desire to "return to the jungle and live among his forefathers." By allowing the mind to dwell upon this idea, one obtains a degree of aesthetic satisfaction equaled only by the

Cinema's Transitional Era: Audiences, Institutions, Practices (Berkeley: University of California Press, 2004), 285-286.

¹⁴ Gerald Martin Bordman summarizes the play as follows: "The hero is heir to a gold mine, but he is also heir to a serious problem. While she was carrying him, his mother was terrified by a gorilla, and so he was born with an ape's body & face, if a man's mind. He loves the heroine, but when the normal, handsome man she loves is framed for murder by the villains, the man monkey accepts the blame. His condition makes him exempt from punishment. Deeding over the mine to the girl and her husband-to-be, he heads off to live alone in the jungle. Settings included a rain forest in the midst of a thunderstorm & the 'oriental splendor' of a Cairo courtroom." In Bordman, *American Theatre: a Chronicle of Comedy and Drama, 1869-1914* (New York: Oxford University Press, 1994), 613. The play was subsequently turned into a novel.

exultancy with which one watches the many displays of ultra-simian ferocity afforded by fight after fight, as the ape nature periodically reasserts itself to the detriment of the villain. Besides, there's the pathos of it all. "A great mind, a great heart, and a monkey face." Think of it – and it might have happened to any one of us! Never shall I forget that final scene, in which, just as the curtain is about to fall, the sweet heroine asks, "And Melmoth, Melmoth, what will *you* do?" He replies, "I will return to the jungle, where alone is peace and contentment for the Man Monkey!" So this was his "terrible secret" – this circumstance of having had a father who wasn't strangled by a gorilla, and of having consequently the visage of a gorilla – rather a difficult secret to keep, which was why Melmoth told it to everybody in the play at the outset.¹⁵

Clearly, Hartt finds it impossible to take this melodrama seriously; every sentence is intended as a joke. In allowing his own mind to dwell upon the idea of a man monkey, he verbally dissects implausibility after implausibility. There is the suspicious pseudoscience ("based on Darwin's theory," "it could have happened to any one of us!"), the rapid-fire plotting (the "ultra-simian ferocity afforded by fight after fight"), the "secret" of resembling a gorilla ("a difficult secret to keep"), and the title that simultaneously tries to entice the audience with a secret but immediately gives away said secret ("Melmoth told it to everybody in the play at the outset").

Hartt relishes in the larger irony of a play cloaked in the posturing of scientific theory that appeals to what he considers the most simian of audience impulses. The working-class audience of melodrama – the "Neolithic mentality," as he puts it¹⁶ – is claimed by Hartt to lack the wits to hold together developments over multiple scenes; instead, the populace craves pure stimulus. Melodrama supplies the stimulus by piling improbable scenes of extremity upon each other, held together by Manichean sentiments. He reports the author of another melodrama as admitting that "while working on it, I had to laugh at its incongruities and impossible situations..." These incongruities, Hartt claims, are lost on the audience, who "took the performance one inning at a

¹⁵ Rollin Lynde Hartt, *The People at Play* (New York: Arno Press, 1975 (1909)), hereafter abbreviated PP, 177-178; original emphasis.

¹⁶ PP 182.

time, each new shocker obliterating its predecessor. And it is precisely this brevity of perspective that makes a series of unrelated episodes more facile...Make scene depend upon scene and you cruelly overtask the Neolithic mentality.”¹⁷

References to the Neolithic mentality run throughout Hartt’s book and form a common spectatorial assumption that is said to make many popular amusements possible. The Neolithic mentality is easy to manipulate because it is easy to occupy and because it cannot note incongruities or contradictions. Elsewhere, Hartt writes that the burlesque show “reflects, with pitiless accuracy, the mental life of its audience”—an audience which is “incapable of sustained attention, assertive memory, logical inference, or that range of consciousness which groups many incidents into a harmonious whole...”¹⁸ Likewise, the showman at the Dime Museum, jokingly called “Professor Bumpus,” introduces the freak shows with speeches that, “[r]eceived with laughterless respect by the folk around you...become a very significant and illuminating reflection of proletarian ignorance – the ignorance which has been for centuries the corner of the state.”¹⁹

Hartt authorizes himself to laugh at this audience precisely because of the “laughterless respect” that the audience holds for nonsensical contradictions (in the case of melodrama), poor local talent masquerading as legitimate performance (in burlesque), and sights that are either morbid or fraudulent (in the Dime Museum). Because Hartt links intelligence to a sense of humor in noting absurd contradictions, there is no intelligent response to these amusements but to laugh at them. If the audience cannot find the joke in all of it, they become part of the joke.

¹⁷ PP 187-8.

¹⁸ PP 15.

¹⁹ PP 94.

Always defined by its lack of discriminating power in comparison to the cultivated critic (the latter always being Hartt himself), the Neolithic mind is said to occupy a baseline position of powerlessness in the surrounding culture. Able to be whipped into a frenzy almost at will, the masses can always be fooled out of seeing the destitution of their lot. Of the dime museum spectator he chillingly writes:

Think you it is the progress of enlightenment that sanctions and perpetuates our scheme of human relationships? Far otherwise. Rather it is the survival of benightedness. So long as endures the gallery of “exclusive living oddities”...so long will there abound those scullions...upon whose docility we depend for our maintenance. Given intelligence to perceive the joke implied in the adoration of abnormalities, they might detect the huge practical joke played upon them by destiny.²⁰

This may read like Social Darwinism (especially given the uncomfortable implications of the “Neolithic” language of his derisions), but the differences between classes are *not*, for Hartt, a function of ingrained characteristics. No one is *really* more highly “evolved” than anyone else. Rather, the differences are found only in education. The showman at the Dime Museum is a parody of an art critic, drawing attention to this and that feature “to do for freaks what Winckelmann did for Greek sculpture;”²¹ but the very parodic structure of the similarity allows Hartt to note that “we [critics] too need prompting, on occasion,” to be told what to admire.²² Of the artificial surfaces and gaudy architecture at the amusement park he writes:

To those for whom it is particularly designed it represents a jubilant paradise of beauty. Indeed, it contributes not a little to aesthetic education. The people, like yourself, arrive at artistic appreciation through an ever diminishing series of humbugs.²³

²⁰ PP 108-9.

²¹ PP 94.

²² PP 96. Throughout his chapter on Dime Museums, Hartt refers to the institution as a twisted reflection of an art museum.

²³ PP 54.

Hartt cared deeply about matters of aesthetic cultivation and education in the sciences,²⁴ but he remained cynical about the possibility of mass amusements fulfilling this function. The vast majority of cheap entertainment is ultimately considered to be so many species of humbug: deceptions and swindles cheating the credulous out of their money. Hartt took the power of humbug seriously. Some years earlier, he had attributed the extreme poverty of New England farmers partly to a flood of fraudulent investor schemes.²⁵ He considered the Mormon church's hold on Utah politics a corruption of democracy "sanctioned by fabricated 'revelations,'" using outrageous religious dogma for consent to ritual tyranny ("the Mormon evangelist has appealed solely to the ignorant, unenlightened masses").²⁶ As a journalist, Hartt took particular exception to the yellow journalism methods of William Randolph Hearst, who had gained tremendous monetary and political influence by knowing and exploiting the Neolithic mind:

Mister Hearst has fathomed the mysteries of Underworld psychology. He knows he can preach abomination in one column, holiness in the next; damn today what yesterday he praised; give himself the life – habitually and as a beverage – and never get caught at it.

²⁴ Hartt, "Learning to Judge Pictures," in *The Congregationalist*, 20 January, 1898, 91-92, is a lay introduction to art history and criticism. In a later book based on his stint as the Paris correspondent for the *Boston Transcript*, *Understanding the French*, he writes admiringly of the ubiquity of art in everyday life in Paris. (He considers the then-recent advent of modernist painting a monstrosity, but an acceptable consequence of such saturation of aesthetic cultivation.) See Hartt, *Understanding the French* (New York: McBride, Nast, and Company, 1914), 77-103.

On the social value he places on scientific education, see Hartt, *Confessions of a Clergyman* (New York: MacMillan, 1915), 201-211. He would return to similar issues some years later when he covered the Scopes Monkey Trial. See "Scopes Trial: What Lies beyond Dayton," *The Nation*, 22 June, 1925, <http://www.thenation.com/article/scopes-trial-what-lies-beyond-dayton>. Last accessed 14 April, 2012.

²⁵ See Hartt, "The Regeneration of Rural New England, I.—Economic," *Outlook*, 3 March, 1900, 505. Interestingly, this essay (with two others) was written in response to an earlier piece on "life in a decadent New England town," whose tone was so mockingly acidic toward the inhabitants it inspired a wave of backlash from readers and critics.

²⁶ See Hartt, "The Mormons," the *Atlantic*, February 1900, <http://www.theatlantic.com/magazine/archive/1900/02/the-mormons/5339/>. Last accessed 14 April, 2012. The thrust of Hartt's criticism of the Mormon doctrine is its embarrassingly literal doctrines of interpretation, effectively saving its adherents the trouble of interpretation and decision; in this way, the church becomes accepted as the natural arbiter in all social matters.

The “deadly parallel” scares him not. His readers haven’t the scope of consciousness necessary to the appreciation of self-contradiction.²⁷

3. Filmtricks as sensory education

Hartt’s enthusiasm for moving pictures is borne out of precisely these matters: aesthetic cultivation and protection from humbug. Motion pictures, originating in the laboratory and not on a cheap stage, arose as “the most preeminent triumph of science’s master ingenuity,” a “success unparalleled in the chronicles of achievement.”²⁸ Unlike the melodrama or the burlesque show, film subjects “have afforded the people the most artistic and educative and delightful entertainment ever proffered for a dime.”²⁹

He relates a short history of the “biograph” up to its present state of delightful entertainment: originally popular for the sheer novelty of reproduced movement, the range of recorded subjects soon grew monotonous, which led producers to build upon the invention in two ways. The first way consisted of pictures arranged to tell a story, transcending its mechanical origins to a display of human passions equal to the novelist’s use of the printed page: “the people forgot the film, forgot the screen, and forgot themselves....For myself, I own without shame that my heart has leaped up within me, and that more than once I have shed honest tears while watching those thrilling and ever fascinating little celluloid dramas.”³⁰

²⁷ PP 26.

²⁸ PP 115.

²⁹ PP 152.

³⁰ PP 127.

The second way (a Comic Muse complementary to the storyteller's Tragic Muse) consisted of taking the original acknowledgment of the mechanical apparatus further. If original audiences delighted at "that most adorable prank of the retina which psychologists call 'persistence of vision'" and wondered at "our discovery that we were endowed with visual faculties so nobly gullible,"³¹ the discoveries of substitution tricks allowed for new comic possibilities of amusement. Hartt goes on to describe several tricks in detail: a man who appears to lose his legs to an oncoming car (only to have them miraculously re-attached),³² a show of miniature dancing-girls inside a box, and a handful of others.³³

Hartt's separation of tragic and comic genres along different kinds of appeals gives way to a distinct method of describing each kind of film. The best dramas for Hartt have a human element which conquers the mechanics of the apparatus and stake a place for themselves within the history of artistic media. The physical medium itself drops away, in favor of the evocation of emotions through expression. A critic cannot cry at a machine-amusement, and Hartt's tears at the picture show are evidence of film's potential as an *art*. Hence, he focuses on those features of film that are analogous to other arts: its textural qualities (which he compares to Rembrandt's etchings), its ability to suggest three dimensions in two,³⁴ and its actors' performances.³⁵ Trick films, by contrast, find new ways to *assert* the optical mechanics at work. The reactions that tricks evoke are closer to that of film's original appeal: sheer delight *that* such sights are

³¹ PP 126.

³² PP 137-138.

³³ PP 140.

³⁴ PP 130-131.

³⁵ PP 140-152. Hartt notes the lack of magnetic presence by the actors onscreen in comparison to the stage as a potential problem, but a solution to the flesh-and-blood presence of poor acting in cheap theater.

possible, a recognition that one's eyes are being tricked, and a curiosity as to their veiled workings. Hence, the majority of Hartt's celebration of trick films consists of describing how the tricks are done. Hartt's own drawings that accompany the chapter serve an explanatory function (in the book's other chapters, their use is merely illustrative), serving as miniature behind-the-scenes diagrams.

While there is nothing to prevent Hartt from describing the shooting process of filmed dramas, he indicates by his silence that such descriptions are beside the point of their appeal. Trick films for him *inherently* provoke a curiosity that dramas do not, and that curiosity can only be answered by appealing to a technical discourse outside the film.

This strategy of discussing trick films is not unusual for its time. A 1906 article in *Cosmopolitan* by Theodore Waters (a journalist who specialized in popular science) had revealed details from the shooting of the chase film *Escape from Sing-Sing* such as changing locations, directing the actors, and hurdy-gurdy music playing off-camera. This behind-the-scenes operational discourse, as Jan Olsson notes, found an eager home in "the discourse concerning trick films and their fantastic effects."³⁶ Hartt's fascination coincides with a flurry of technological discourse on film tricks, which rose and fell in rough proportion to the popularity of the trick film itself.³⁷

³⁶ Olsson, 43. The original article is Waters, "Out with a Moving Picture Machine," *Cosmopolitan* 40.3 (January 1906), 251-259; reprinted in *Film History* 15.4 (2003), 396-402.

³⁷ See Philippe Gauthier, "A Trick Question: Are Early Animated Drawings a Film Genre or a Special Effect?" *animation: an interdisciplinary journal* 6.2 (July 2011), 168-169. Gauthier summarizes the historical debates around the rise and fall of trick films; following Alain Carou, he notes one potential cause of their decline as the influx of technological discourse (that is, revealing the trick). Georges Méliès famously resented the publication of the tricks' explanation as tantamount to betraying trade secrets of magicians.

This kind of discourse, of course, goes back well before Waters's *Cosmopolitan* article; explanations of the illusion of the moving picture camera were in wide circulation before most people could even see the pictures.³⁸ As Tom Gunning has famously argued, cinema's earliest spectators delighted in the fact that the illusory movement onscreen *was* an illusion, a "vertiginous experience of the frailty of our knowledge of the world through the power of visual illusion."³⁹ This experience was closely linked to what Gunning calls *curiositas*, "a visual curiosity and desire for novelty."⁴⁰ The optical games begun in toys like the stereoscope and the phenakistoscope had continued throughout the late nineteenth century in periodicals like *Scientific American*, through casual entertainment/enlightenment pieces that invited readers to fool their own eyes at will—an example of the near-ubiquitous "operational aesthetic" in the late nineteenth century that invited audiences to gaze upon the inner workings of various illusions.⁴¹

³⁸ It was customary for accounts of Edison's kinetoscope to include a technical description of it, including reference to persistence of vision. This kind of narrative first appears two years before the kinetoscope was ready for public view, in "Edison's Kinetograph and Cosmical Telephone," *Scientific American* 64.25 (20 June, 1891), 393. Even when the short-lived kinetoscope *was* available for public consumption, it was much more likely to be encountered in the pages of a magazine or newspaper than in person. For an example of the former, see W.K.L. Dickson, "Wonders of the Kinetoscope," *Frank Leslie's Popular Monthly* 39.2 (February 1895), 245-52.

³⁹ Gunning, "An Aesthetic of Astonishment," 124.

⁴⁰ Gunning, "Astonishment," 124. It is significant that Gunning distinguishes *curiositas* (following St. Augustine) not simply as a love or desire for knowledge, but a peculiarly modern, popular, and secular phenomenon, a (for Augustine potentially dangerous) taste for *novel* knowledge, as opposed to a deepening of already-known or traditional principles.

⁴¹ On the operational aesthetic see Harris, 59-90. Interestingly, Harris sees the rise of the operational aesthetic as inseparable from the problem of humbug. The Jacksonian everyman-democratic spirit of 19th century America, which had "placed all authority – social, moral, aesthetic, even religious – in the hearts and minds of the ordinary citizen" (3), created the inevitable problem of whom or what the common man should believe: if anyone could be an authority, how does one identify the wrong authorities? "Critics charged that the destruction of deference would encourage a generation of tricksters and confidence men. Ordinary men, insisting upon full equality, would find themselves exploited by mercenary hypocrites." (4) This is *exactly* the problem that Hartt finds so vexing and dangerous, and he looks to the sciences as one solution to such difficulties.

For examples of illusions in *Scientific American* see George M. Hopkins, "Science in Toys," 56.8 (5 February, 1887), 89-90; "Curious Optical Illusion," 59.22 (1 December, 1888), 343; "Optical Illusions Adapted to the Lantern," 63.26 (27 December, 1890), 406; "Interesting Optical Illusions," 64.2 (10 January, 1891), 22. Hopkins also

Such periodicals also routinely revealed the mechanics of magicians' illusions and crank inventions, in a broader project of scientific-educational uplift against superstitions, appeals to occult forces, and humbug.⁴² By invoking and extending this discourse, Hartt asserts the technical knowledge of a film trick as holding a power over the trick, as well as a power over oneself. What's interesting, however, is the way Hartt *comments* on this knowledge as bound to the desire for novelty. The Neolithic spectator rears its head again when Hartt makes a small lament that pleasure in the tricks can be dulled:

Such "triumphs of science's master ingenuity" never fail to please the millions, for the millions fail quite uniformly to appreciate the ingenuity....And for my own part, I confess that certain moving pictures have charmed me less since I rifled their mystery....Rather would I shriek with the gullible when pictures taken in slow succession appear on the muslin in swift succession, producing an illusion at once amusing and bewildering.⁴³

Disregarding the suspicious assumption that popular audiences had no knowledge of how the tricks worked, Hartt mourns gently the loss of wonder that inevitably accompanies a new discovery. One who never learns the trick will never tire of it; once the trick is learned, the delight becomes disposable. There is something of an innocence lost. While Hartt is being

authored *Experimental Science*, a book that compiled optical parlor illusions. Not coincidentally, Hopkins led the first demonstration of the kinetoscope to a public audience in 1893. See "First Public Exhibition of Edison's Kinetograph," *Scientific American* 68.20 (20 May, 1893), 310.

⁴² For explanations of magic see, e.g., "Side Show Science," *Scientific American* 48.14 (7 April 1883), 210. For a particularly interesting defrauding of a crank, see the continual coverage in *Scientific American* of the Keely Motor. Some examples: "The Keely Motor Deception," 37.9 (1 September, 1877), 137; "A Keely Séance," 38.26 (29 June, 1878), 401; "The Keely Motor Deception," 44.5 (29 January, 1881), 69; "Perpetual Motion Delusions," 44.23 (4 June, 1881), 352. John Keely's motor, which was able to get sporadic support from Philadelphia investors for decades without a single successful demonstration of the principle behind the motor, became such a regular object of ridicule as pseudoscience that the Keely name became a shorthand throughout the magazine for humbug more generally.

The tone in treatments of magic acts and of humbugs differs markedly, with the former being considered clever entertainers and the latter considered dangerous. For more on the secularization of stage magic in the nineteenth century see During, 107-134.

⁴³ PP 137-138.

somewhat disingenuous about this innocence, he does acknowledge a risk of the amusement-in-discovery at never being wholly satisfied.

Hartt's very prose plays with this risk: even while he wishes for the blissful awe of the masses, he divulges half a dozen tricks for the reader anyway. The price paid for *not* knowing the tricks is ignorance, and ignorance leaves one vulnerable to manipulation by those who *do* know better. While the hypothetical ignorant may be endlessly entertained by the same thing, the educated are always on the verge of boredom. To re-create the original wonder of the senses being fooled, film had to find new ways to fool the senses: hence the sheer quantity of tricks that Hartt discusses, the new illusions piling high atop each other.

The value that Hartt places upon trick films is that of a pedagogical project for the senses, a modern imperative to not allow oneself to be taken in. His delight in trickfilms replaces the manipulative *deception* of illusion with what he calls elsewhere a playful *consent* to illusion. In his chapter on amusement parks, Hartt again references the pleasures of duped perception, similar to cinema's original "adorable prank on vision":

To get the maximum wonder out of an illusion, you mustn't be too rational, since at bottom the marvel isn't that the eye can sometimes be fooled, but that the eye can so rarely be fooled. When, at the age of four, you thought your railway train had started and discovered that, instead, the train next yours had been moving in the opposite direction, you crowed with glee; you felt that something most extraordinary had been taking place inside you, and you valued yourself more highly on account of it.⁴⁴

The dynamic of this illusion rests on a kind of second-order wonder at the first-person experience of motion: an objective discovery about a subjective experience, an impression of a rolling train "taking place inside you." Taking the falsity of the sensation of movement as an astonishing discovery about one's senses allows Hartt to domesticate and study the sensation as a

⁴⁴ PP 60-61.

new result of a kind of experiment with the contours of his own body. The sensation can be enjoyed *and* held at a distance, felt in the flesh *and* looked at from above.

Hartt likens this pleasure to deceptions more generally, as capable of offering a joyous irony: “To be gulled, to know you are gulled, and to know that the people who gull you know you know they’re gulling you – ah, the bliss!”⁴⁵ Such ironies include the pleasures of Spook House optics (where “your fellow mortals [are] innocently burned alive before your eyes”), fortunes told at the palm-reader’s booth (verging less “upon deceit than upon romantic fiction”), and the biograph itself. In all cases, “you consent to illusion, just as when you opened *The Prisoner of Zenda*,” allowing immediate impressions to become characters controlled in a fictional drama (or comedy).

Consent of this kind, practiced before the screen, allows one to take pleasure in the illusion *while* knowing better. This very attitude is instantiated by Hartt’s own relentlessly ironic prose. Popular amusements for Hartt, recall, were everywhere filled with humbug and fraudulence; most of his book can be read as a handbook for dulling oneself to the temptations of credulity. Trick films served as a model for coping with a broader culture of illusions – illusions of all kinds that awaited spectators, who may believe with credulity (and thus become the butt of the joke) or play a game with their impressions (and thus rise above those impressions by making a joke of them).

Hartt’s celebration of cinema, then, as a redemptive tool for mass culture, *needs* the appeal of the trick film and the technical discourse around it. While the dramatic examples of film could be valued as timeless art, the properly *scientific* origins of film reasserted themselves in trickfilms; these films invited the curiosity of a scientific mind. They uniquely offered a kind

⁴⁵ PP 61. Subsequent quotes are taken from the same page until otherwise noted.

of sensuous tutorial in self-conscious humbug, inviting a viewer to laugh at oneself so as to not take one's initial impression so seriously. Trick films made jokes of impossible sights and made technical explanation necessary by their very impossibility; their comedic spirit is mirrored by Hartt's own, eager to point out incongruities as a sign of ingenuity. As a particularly powerful and delightful instantiation of this attitude, trick films made light ironies of perception itself *by means of* perception.

4. Interlude: from trickfilms to cartoons

By the time that Hartt was singing the praises of the trickfilm in 1909, its popularity was already on the decline. Historians of early film tend to agree that trickfilms disappeared for the very reason that Hartt's own prose hinted at: the lapsing of novelty into boredom. Donald Crafton favorably quotes J. Stuart Blackton, one of the innovators of technical tricks in *Humorous Phases of Funny Faces* (1906) and other films, on his own loss of interest in the matter, that "once the novelty had worn off, trick pictures 'became deadly monotonous for the mature mind.'"⁴⁶ Kristin Thompson argues that filmtricks, relying on mechanical novelty as the original apparatus had a decade before, made for an awkward fit with the nascent systematization of cinema's appeals toward "an ideology of realism" through the star system, genres, and the

⁴⁶ Crafton, *Before Mickey*, 29. Crafton argues more particularly that *The Haunted Hotel* (1907) had worked to briefly revive interest in the trickfilm by displaying a large number of well-done tricks (like a knife that appears to cut a loaf of bread on its own) and creating a scandal of apparent mystery regarding how the stop-motion was done.

priority of storytelling.⁴⁷ Philippe Gauthier writes that by the early 1910s, “[t]raditional tricks such as the stop-motion technique...seemed to not hold the same fascination for audiences, who were always in search of something new.”⁴⁸ Filmtricks, it seems, came with expiration dates.

It was in this environment that animated drawings first sprung up in French cartoonist Emile Cohl’s darkly comic *Fantasmagorie* (1908), an incoherent series of restlessly transformative white lines on a solid black background in stick figures and basic shapes. A trademark of Cohl’s would later be seen as holding some of the primary power of animation itself: the “extended metamorphic sequence in which the outlines of objects continually melt into each other.”⁴⁹ American cartoonist Winsor McCay built upon and extended this emphasis on the primacy of drawing in his own *Little Nemo in Slumberland* (1911) and *Gertie the Dinosaur* (1914). Cohl continued to experiment with the apparatus in other ways (such as making a hand-drawn moon react in real time to a photographed man), but McCay focused on his own considerable talents of draftsmanship. He gave his figures *personality* and gave his forms consistent weight and proportion. Faces and poses are endowed with detail and expression. At one point in *Nemo*, McCay makes his characters rotate before the audience, making them seem to (at least possibly) exist from perspectives other than the frontal view with which they are presented. The space around them gains an illusionistic thickness through a calculated use of Renaissance perspective. Further on, Nemo himself and his princess can be seen shrinking away through foreshortened perspective, riding a dragon. Although there is no hint of any setting around the characters (the page around them remains white), they do not appear to be *getting*

⁴⁷ Thompson, 108.

⁴⁸ Gauthier, “Trick,” 168.

⁴⁹ Crafton, *Before Mickey*, 70.

smaller but *flying farther away*, toward some unseen horizon. With foreshortening, the blank white of the page is dynamized into a voluminously empty space: it's no longer seen as simply the absence of activity around something, but an environment in which a character can freely move.⁵⁰

“Animated cartoons” quickly shook off their connotations with trickfilms and, beginning with Cohl’s *The Newlyweds* series in 1913, they became recognizable as a genre of their own.⁵¹ Two primary factors seem to have cartoons them apart from the earlier logic of trickfilms into a definable genre. First, the development of the cel technique by J. R. Bray and Earl Hurd enabled cartoons to be produced along a division of labor according to regular release schedules, making possible a regular (if marginal) place on the theatrical program.⁵² Second, ingenuity was no longer the point of the wonders on display. Instead, as Scott Bukatman argues:

Animated drawings provided something that the stop-motion objects & trick effects did not: *character*. Not only did an image move, but the animated figures seemed to possess personalities—they were not simply *lively* but *living*.’...And the first cartoons to provide what would come to be called “character animation” were American. It would be difficult to empathize with the stick figures or animated microbes that populated the cartoons of Emile Cohl, but Nemo, Gertie, Felix, & their like were easy to love...’⁵³

The living personalities of cartoon characters, according to Bukatman, give them an appeal that forms a complex gesture of resistance to the automation of the machine age. Products of machinery through and through, animated characters nonetheless behave in unruly and

⁵⁰ For a more detailed description of these wondrous effects see Scott Bukatman, *The Poetics of Slumberland: Animated Spirits and the Animating Spirit* (Berkeley: University of California Press, 2012), 115-118.

⁵¹ See Crafton, “Genealogies,” 105. Crafton locates the first use of the term “animated cartoon” in promotional materials for Cohl’s series.

⁵² See Thompson, 110.

⁵³ Bukatman, 5, original emphasis.

unforeseen ways that escape the large-scale imperatives throughout the Second Industrial Revolution to measure and control human movement.⁵⁴

[They] do not simply have life; they have a life of their own, and this rebelliousness can be read as a further sign of vitality. These characters are marked by a youthful, exuberant energy that cannot—and should not—be easily contained. They are not mere automata, products of an enervating assembly line—despite the paradoxical fact that this is *precisely* what they are. They are, then, disobedient machines.⁵⁵

Once made into an *art*, exploitations of the apparatus could be endowed with something like a soul—a soul that could critique and offer an alternative to what some viewed as oppressive and reductive conditions under modernity.

5. Vachel Lindsay's gospel of cinematic beauty

The publication of Vachel Lindsay's *The Art of the Moving Picture* coincided roughly with the consolidation of the classical Hollywood studio system around the feature-length narrative film, and his book is often taken as a sign of the newfound middle-class legitimacy of the feature film.⁵⁶ However, his remarks on trick pictures make up a major thematic component of the book, forming a thesis remarkably consistent with the logic that emerged in animated cartoons. By the time Lindsay was writing, the trickfilm was dead; Lindsay exhorted that the

⁵⁴ Bukatman specifically argues for the cartoon (and comic strips) as parodying and re-appropriating the scientific management of Taylorism and the chronophotographic measurements of Etienne-Jules Marey. See especially 27-46.

⁵⁵ Bukatman, 6, original emphasis.

⁵⁶ See, e.g., See Eileen Bowser, *History of the American Cinema: The Transformation of Cinema, 1907-1915* (New York: Charles Scribner's Sons, 1990), 272. Significantly, Bowser closes her book with the publication of Lindsay's *The Art of the Moving Picture* and William Hannon's *The Photodrama: Its Place among the Fine Arts*, as reflecting "the excitement felt by intellectuals when, in 1915, they began to look at the extraordinary phenomenon of the motion picture.

form could be revived into a vital and imaginative part of film culture, if the tricks ceased becoming *tricks* and started becoming *characters*. Lindsay thus dialectically continues some of the concerns that Hartt displayed regarding moving pictures and mass culture, by seeking a way to overcome the illusion at work in frame-by-frame pictorial manipulations. His deliberately anachronistic and utopian theory of filmtricks forms less a representative celebration of narrative feature films than a cartoonist criticism *of* the cinema.

Like the budding genre of animated shorts, Lindsay's work performed a bold affinity for newspaper cartoons. Trained as an artist at the Chicago Art Institute, he referred to the drawings that accompanied some of his early self-published poems as "picture-cartoons,"⁵⁷ and in an introduction to his *Collected Poems* in 1925 (also containing some of his drawings), he calls himself a "cartooning adventurer, a cartooning preacher."⁵⁸ He considered cartoons a powerful part of what he saw as America's turn from a word-culture to a picture-culture, a culture of hieroglyphics. Simply-composed pictures, relying on caricature and visual symbols, were for Lindsay a bright spot of beauty in an otherwise dismal scene of mass-culture obsessions with commodities and material gain.

But what's strange about Lindsay's embrace of cartoons, and about his idea of mass culture "hieroglyphics" more generally, is his desire to *divorce* such pictures (typically characterized by their very accessibility and ubiquity) from any association with mass consumption.⁵⁹ There is very little about Lindsay's early career to indicate that film would be of

⁵⁷ Lindsay, *Adventures While Preaching the Gospel of Beauty*, collected in Dennis Camp, ed., *The Prose of Vachel Lindsay*, vol. 1 (Peoria: Spoon River Poetry Press, 1988), 157. Hereafter the collection will be abbreviated PVL.

⁵⁸ Lindsay, *Collected Poems* (New York: MacMillan, 1925), xxvi.

⁵⁹ This is an important point that goes against Miriam Hansen's reading of Lindsay in *Babel and Babylon: Spectatorship in American Silent Film* (Cambridge: Harvard University Press, 1991). Hansen takes Lindsay's

any interest to him. Before achieving notoriety as a poet in 1913 (when Harriet Monroe published his *General William Booth Enters into Heaven* in her Chicago journal *Poetry*⁶⁰), his career reads like an avowed refusal of mass publication. Returning to his native Springfield, IL, after his art education, Lindsay crafted a fiery evangelical rhetoric over two collections of editorials, poems, personal statements, short stories, and sermons that he published himself and distributed *gratis* to his fellow-citizens: first his *War Bulletins* (printed in 1909), then his *Village Magazine* (first printed in 1910). Twice he tramped on foot across large regions of the American countryside, offering recitations or copies of his self-explanatorily titled *Rhymes to Be Traded for Bread* to anyone who would offer him food and lodging. On both trips he avoided cities and railroads, believing America's better character to be found in the footpaths, open barns, and

invocation of film as a potential hieroglyphic visual language to be, along with D.W. Griffith's Egyptian invocations of a "universal language," evidence of the large-scale middle-class uplift of movies that homogenized the variety-program profile of working-class nickelodeon audiences into a single obedient featureless "spectator." She writes:

In [*Birth of a Nation*] Griffith's notion of a universal film language converges with that of another prophet of motion picture millennialism, the poet Vachel Lindsay. ...Lindsay elaborates his vision of film as a democratic art in terms of a new language of "hieroglyphics," specifically a new "American hieroglyphic" in the tradition of Emerson, Poe, and, above all, Whitman. No less transcendently inspired than Griffith, he linked his advocacy of film hieroglyphics to the emerging idiom of modern consumer economy:

"American civilization grows more hieroglyphic every day. The cartoons of Darling, the advertisements in the back of the magazines and on the bill-boards and in the street cars, the acres of photographs in the Sunday newspapers, make us into a hieroglyphic civilization far nearer to Egypt than to England."

Lindsay's enthusiasm for commercial picture-writing elides questions of authorship, interest, and power not unlike the consumerist script it celebrates—a script proliferating in an abundance of seemingly uncoded, transparent, and universal images." (78-79)

There are a variety of reasons to be suspicious of this claim. First, Lindsay does not hold to the notion of middle-class obedient spectatorship that came to characterize the feature film. He positively *embraces* the audience's ability to talk back to the screen, filing in and out when they please. Second, Lindsay's politics, by and large, do not fit the industry rhetoric of sheer popularity validating film as an art; good taste, for Lindsay, is not synonymous with consensus or profit. Third, the terms of Lindsay's film aesthetics show little interest in the emerging narrator system that was producing "the spectator."

⁶⁰ See *Poetry* 1.4 (January 1913), 101-103. While Lindsay's name has largely been written out of the canonical story of early twentieth-century poetry, Monroe published Lindsay regularly in her important journal for the next two years, alongside such budding poets as Amy Lowell, Carl Sandburg, and Ezra Pound. She also wrote the introduction to his next book, *The Congo and Other Poems* (1914).

often-illiterate peasant workers and farmers.⁶¹ Harriet Monroe assessed Lindsay's poetry as inseparable from his ideals and lifestyle as

a crusader....The people [of America] had intended beauty—in that belief [Lindsay's] faith was sure; it was his business to strip off cheap offerings, the tawdry incrustations of false ideals, and reveal to them the living shrine. This, in his opinion, is what the poet is for.⁶²

Among his social causes, Lindsay was especially driven by a need for a rapidly-urbanizing America to retain its loosely-connected and provincial character. This required a radical challenge to the forces like railroads that were shaping America as increasingly automated and homogeneous in nature. His "Gospel of Beauty," the ethos he set to plant across the country (in a manner not-so-subtly similar to the apple orchards planted by John Chapman, whom Lindsay admired and frequently referenced), proclaimed what he called a "New Localism": a demand that the artistic talents of each American town "wander over the whole nation in search of the secret of democratic beauty," then return home to enrich the town's own sense of beauty.⁶³

Film, a paradigmatically modern invention of the impersonal scientific age, does not lend itself easily to these values. But Lindsay did frequent the "motion picture art gallery" (as he once calls it),⁶⁴ and he saw in film's popularity and accessibility the potential to beautify the country by a peculiar new means. His second book of poetry, *The Congo and Other Poems*

⁶¹ Or to be more accurate, he *attempted* to avoid them, with varying degrees of success. *Adventures While Preaching the Gospel of Beauty* makes a running joke of Lindsay often being forced to walk along the railroad tracks and sometimes succumbing to the temptation of automobile rides.

⁶² Harriet Monroe, "Lindsay's Poems," *Poetry* 3.5 (February 1914), 182-183. Monroe praises Lindsay more for his sense of morality and his ambitions than his verse. On the question of how well his style conveys his message, she pithily notes, "at least it is a beginning."

⁶³ Lindsay, *Adventures*, in PVL 157-158.

⁶⁴ Lindsay, *The Art of the Moving Picture* (New York: Liveright, 1970 [1922]), 226, hereafter abbreviated AMP. Note that the pagination is taken from the version reissued in 1922, not the original 1915 edition.

(1914), contained poems for screen heroines Blanche Sweet and Mary Pickford.⁶⁵ References in *The Art of the Moving Picture* indicate that he bought and scoured fan magazines as well.⁶⁶

But throughout *The Art of the Moving Picture*, Lindsay makes his case for movies as a legitimate art by relentlessly de-emphasizing the presence of actors or stars. Unlike the stage, Lindsay claims, the film screen tends to sap the lifelike quality of an actor from his likeness: actors look more like dolls or like scenery. Film is thus best conceived not as a reproduction of a performance (a common way to disqualify film from being a proper art at the time), but as an autonomous visual medium. Actors are but a *part* of this medium, and not even the most important part. Making liberal use of his arts education (references to painters and sculptures easily outnumber the examples of actual films), Lindsay argues for locating the art of film in its power of pictorial arrangements.

While the book's first half, devoted to matters of aesthetics, functions primarily as a typology of genres (with each genre finding a model for artistic success in a different visual art), the dolllike quality of actors onscreen is a theoretical axiom that Lindsay repeats throughout the book. The quality is first mentioned in his remarks on the "action picture," his term for films based on chases and rescues. Action pictures show most clearly the aesthetic dangers of this tendency. These films do not work like human dramas but "like the express elevators in the Metropolitan Tower."⁶⁷ The most ubiquitous of the genres Lindsay discusses, as well as the genre for which he holds the least amount of hope, the action picture is said to appeal to "the

⁶⁵ See *To Mary Pickford and Blanche Sweet*, in *The Congo and Other Poems* (New York: MacMillan, 1914), 106-110.

⁶⁶ For example: "I have a dozen moving picture magazine clippings, which are in their humble way first or second cousins of mural paintings." (AMP 166.)

⁶⁷ AMP 39.

incipient or rampant speed-mania in every American.”⁶⁸ This peculiarly modern “speed-mania” is marked by an attraction to the sensation of velocity and a penchant for curiosity and ingenuity.⁶⁹ He remarks in passing on an unnamed Civil War picture which had Union and Confederacy fighting over a steam engine, wherein the engine, by a happy accident of filmmaking, “took on more personality in the end than private or general on either side,” “full of character and humor amidst the tragedy, leaking steam at every orifice.”⁷⁰

What may initially read like a joke turns out to be a major theoretical point of Lindsay’s, a kind of inverse to the first axiom: objects when filmed can sometimes look mysteriously alive. This “Halloween witch-power” of the camera⁷¹ becomes the axis around which the “picture of fairy splendor” turns.

6. The value of fairy splendor

Lindsay locates the roots of this witch-power in trickfilms, which were accordingly misguided in their attempts to provoke the audience’s ingenuity with their “mechanical

⁶⁸ AMP 41.

⁶⁹ On the former point, Lindsay remarks that when the action picture fails on its own merits, it produces nausea like an elevator moving too quickly, wherein “characters become dead cats flung by street urchins” (AMP 41). On the latter point he writes: “The audience, mechanical Americans, fond of crawling on their stomachs to tinker their automobiles, are eager over the evolution of the first weapon from a stick to a hammer. They are as full of curiosity as they could well be over the history of Langley or the Wright brothers....The dire perils of the motion pictures provoke the ingenuity of the audience, not their passionate sympathy...” (AMP 38)

⁷⁰ AMP 43.

⁷¹ AMP 59.

legerdemain” that soon became “a nuisance.”⁷² *Moving Day* is his chosen example for this danger (an example which proves significant later in the book). The film concerns a house full of furniture that gets up and moves itself to another home, a single joke repeated *ad nauseum* that obsesses over the cleverness of making objects appear to move. The film fails, according to Lindsay, because

the producers have not thought out the philosophy behind it. The charm in a so-called trick picture is in eliminating the tricks, giving them dignity till they are no longer such, but thoughts in motion and made visible.⁷³

Lindsay finds this dignity in a small detail from the film: a family of shoes “walking down the boulevard, from father’s large boots to those of the youngest child. They form a complete satire of the family, yet have a masterful air of their own, as though they were the most important part of a human being.”⁷⁴

In these shoes Lindsay finds the primary appeal of fairy splendor, a pleasure much older than ingenuity: “Mankind in his childhood has always wanted his furniture to do [human] things,” and fairy splendor can tell stories of anthropomorphic objects. According to Lindsay, fairy splendor does not yet exist as a proper film genre. Examples are “much harder to find than they should be;” technical elements of fairy splendor can be seen in advertisements and newspaper comics.⁷⁵ When he comes around to describing in detail how fairy splendor should work, he is forced to make up an example, a retelling of *Cinderella* that stars the glass slipper in motion (“When Cinderella loses [the slipper], it should flee at once like a white mouse, to hide

⁷² AMP 142.

⁷³ AMP 142.

⁷⁴ AMP 61.

⁷⁵ AMP 65. Lindsay’s poetry also often invokes such elements of fairy tale whimsy.

under the sofa”).⁷⁶ Lindsay insists that the means for evoking fairy splendor are not limited to stop-motion. Buildings can be made to “emanate conscious life” by alterations of lighting and shadow.⁷⁷ Figures can transform themselves by means of gradual double-exposure.⁷⁸ He defines fairy splendor roughly as “furniture transfigured, for without transfiguration there is no spiritual motion of any kind.”⁷⁹

The latter definition especially indicates an unusual place for fairy splendor in Lindsay’s picture of film aesthetics. In his other generic examples, the de-emphasizing of the actors onscreen means that film compositions must be made more painterly or more sculptural, taking care that movements onscreen *reinforce* an atemporal character underneath the changes in position: “you producer who have grown squeaky whipping your people into what you called action, consider the dynamics of these figures that would be almost motionless in real life. Remember, there must be a spirit-action under the other, or all is dead.”⁸⁰ What he means by this is that the photographic reproduction of motion is itself extraneous to the potential aesthetic qualities of a film. Film’s successes, for Lindsay, are driven not by “dramatic logic” but by “tableau logic.”⁸¹ But Lindsay’s reliance on *transfiguration* for fairy splendor means that its

⁷⁶ AMP 143. Lindsay also discusses in some detail *The Avenging Conscience* (D.W. Griffith, 1914) as an approximation of fairy splendor’s powers, making liberal use of double-exposure. See AMP 149-151.

⁷⁷ AMP 144-145.

⁷⁸ AMP 146-147.

⁷⁹ AMP 147.

⁸⁰ AMP 132-133. Lindsay repeats this basic point in many different ways throughout the book: producers should look for inspiration in action pictures by examining sculptures and imagining movements placed on top of them in such a way as to preserve their balanced qualities (AMP 121); intimate pictures (his term for chamber dramas) should take paintings as their model and “move” those paintings like a kaleidoscope, putting elements into new relations (AMP 134-135).

⁸¹ AMP, 186.

pleasures fundamentally need a sense of qualitative visible change. Thus, they have no precedent in the plastic arts, and their visualizations are only possible through the unique technical exploitations of film.

Fairy splendor, “furniture transfigured,” thus proves to be a particularly *cinematic* example of cinema—albeit one that does not rely on *movement* (as a figure changing locations) but on *metamorphosis* (a figure unexpectedly changing forms). While Lindsay repeatedly talks about *examples* of special effects, he attaches a logic and a significance to their uses much more akin to that of cartoons: metamorphosis, anthropomorphism, and primitive spectatorship all combine in fairy splendor to form a kind of proto-animation theory. Erwin Panofsky also noted the anthropomorphic qualities of trains in some films like *The General* (Clyde Bruckman and Buster Keaton, 1926) and *Battleship Potemkin* (Sergei Eisenstein, 1925), which seemed in certain ways to place their logic closer to that of the lively cartoon than the realist feature film.⁸² The double-exposure transformation holds for Lindsay a similar function that the openness of the drawn line holds for Eisenstein. In both cases, the point is that whatever is being transformed does not obey the laws of our world: it points to another kind of world, one believed to have been possible before the onset of adulthood or modern mechanics. As Gilbert Seldes insists, the operative term for the cartoon is “magic—not illusion,” because “illusion” implies some kind of flaw or deception; rather, “[i]t remains a plaything, and in a very rudimentary form existed before the terror of the Machine Age set in.”⁸³

⁸² Panofsky, “Style and Medium in the Motion Pictures,” in Gerald Mast, Leo Braudy, and Marshall Cohen, eds., *Film Theory and Criticism: Introductory Readings, Fourth Edition* (New York and Oxford: Oxford University Press, 1992), 240.

⁸³ Seldes, “Disney and Others,” *The New Republic*, 71.914 (8 June, 1932), 102. The “rudimentary form” to which Seldes refers is shadow-puppetry, citing Terry Ramsaye.

Film trickery, for Lindsay, when properly used, can call forth a mode of seeing that is not quite compatible with the ingenuity of the Machine Age. His choice of the term “transfiguration” to describe the pleasures of fairy splendor is carefully chosen: taken from Biblical scholarship, the term refers to one of the miracles of Jesus, wherein he is confirmed as the son of God by radiating light and speaking with Moses and Elijah. In the world of a film, miracles can literally happen onscreen.

It is this capacity to literalize miracles in which Lindsay finds the potential for film to challenge the urban disease of “speed-mania.” Lindsay expands on speed-mania in *A Handy Guide for Beggars*, wherein he lodges at an urban missionary that proves an impersonal parody of the ideals of charity and hospitality. In the middle of this tale he meets several box-car tramps (who, unlike Lindsay, ride the rails), and he notes in a telling aside:

The modern tramp is not a tramp, he is a speed-maniac. Being unable to afford luxuries, he must still be near something mechanical and hasty, so he uses a dirty box-car to whirl from one railroad-yard to another. He has no destination but the cinder-pile by the water-tank. The landscape hurrying by in one indistinguishable mass and the roaring of the car-wheels in his ears are the ends of life to him. He is no back-to-nature crank. He is a most highly specialized modern man. [...]

[A] speed-maniac at either end of the social scale is not necessarily a hustler, personally. But in one way or another he is sure to be shallow & artificial, the grotesque, nervous victim of machinery.⁸⁴

Speed-mania for Lindsay, in other words, is an historically-specific appeal bound to the attractions of American modernity more generally. And, like Eisenstein would later assert, Lindsay assays the power of primitive ways of seeing (i.e., the predilection for anthropomorphizing natural forces) as a form of resistance to the modern faith in mechanism. Lindsay laments that the spirit of ingenuity has infected America’s sense of utopianism and

⁸⁴ Lindsay, *A Handy Guide for Beggars*, in PVL 41.

relegated the task of prophecy (the cultural role of dreaming for a truly better future) to the mechanics and the engineers:

If [Americans] express hopes that can be put into pictures...they order machinery piled to the skies. They see the redeemed United States ticking in jeweled sockets like a watch. This, their own chosen outlook, wearies the imaginations of the people, and they do not know why.”⁸⁵

Lindsay argues that film can cure this cultural ailment because, through its very means of optical trickery, it can create *visions*: not in the sense of visual impressions, but in the prophetic sense of revelation or epiphany. Towards the end of the book, the double-exposure takes on a greater significance as a means of recovering the regular practice of primitives of “seeing their thoughts as pictures in the air”—a practice that is lost to history with the increased concern for novelty and materialism.⁸⁶

By “visions,” Lindsay does not mean literally mistaking a thing onscreen for really being present: one does not see a “vision” of, say, Blanche Sweet on a field in *The Battle* (Griffith, 1914). Neither is a vision exactly a private sensation or a subjective hallucination. Rather, a vision is a kind of overtly fantastical sight whose immediate implausibility and beauty give it practical and ethical significance. Visions hold a crucial place in Lindsay’s thinking regarding the import of beauty and religion in civic life. He repeatedly emphasizes with wonder the deeds that can be performed under the influence of visions. In *Adventures While Preaching the Gospel of Beauty* he praises as “a beautiful enterprise” a Missouri Baptist preaching a story of “how a vision of the Christ-child had appeared on the altar of a lax congregation in Spain. From that

⁸⁵ AMP 309.

⁸⁶ “Many primitive peoples are endowed with memories that are double photographs. The world faiths, based upon centuries of these appearances, are nonetheless to be revered because machine-ridden men have temporarily lost the power of seeing their thoughts as pictures in the air, and for the time abandoned the task of adding to tradition.” (AMP 298)

time those people, stricken with reverence and godly fear, put that church into repair, and the community became a true servant of the Lord.”⁸⁷ The experience leads him to muse more generally:

People do not open their eyes enough, neither their spiritual nor their physical eyes. They are not sensitive enough to loveliness either visible or by the pathway of visions. I wish every church in the world could see the Christ-child on the altar, every Methodist and Baptist as well as every Catholic congregation.⁸⁸

His own writings are peppered with imagined visions, intended to compel readers to act. For example, the story of “The Boats of the Prophets” tells the story of a despairing New York composer and forty other lost souls who become inspired by a collective sight of stars descending from the sky in the form of boats that dump loads of red wine into the East River.⁸⁹ *The Art of the Moving Picture* itself contains at least two imaginative elaborations that could be called visions: one in which Lindsay imagines a film about Springfield that has its own patron-goddess,⁹⁰ and one in which he imagines a future America as a never-ending World’s Fair Exposition.⁹¹ For Lindsay, one lives according to a vision in the way that an artist creates according to a picture of the final product in his mind, testing it against experience. Visions may

⁸⁷ PVL 165.

⁸⁸ PVL 165.

⁸⁹ In War Bulletin 3, PVL 110-113.

⁹⁰ AMP 174-178. The goddess has a statue in the town that is revered by all, and “her actual soul appears in dreams, or visions of the open day, when the days are dark for the city, when her patriots are irresolute, and her children are put to shame” (178). His utopian-futurist novel, *The Golden Book of Springfield*, expands on this premise, imagining a community perfect in its dimensions of beauty, spirituality, and democracy, in the year 2018.

⁹¹ AMP 274-277.

openly contradict each other, may be taken up or tossed aside as the situation demands, and may be debated fiercely.⁹²

What is necessary for a vision to succeed as a vision is that it *not* be explained away. Visions openly acknowledge a place for mystery. Thus, in order for filmtricks to live up to their utopian potentials, they must be taken out of the hands of the scientific men—engineers and inventors who proceed in secular and practical manners like the Wright brothers and Thomas Edison—and into the hands of a higher class of artists, figures that Lindsay calls “prophet-wizards.” Only in the hands of prophet-wizards can the banal technique of illusory motion be newly formed into a guiding force of aesthetic and religious splendor. The stakes for cinema’s place in America’s future are made clear in a lengthy passage that repeatedly invokes the problem of filmtricks:

Edison took the first great mechanical step to give us the practical kinetoscope and make it possible that the photographs, even of inanimate objects thrown upon the mirror-screen, may become celestial actors. But the final phase of this transfiguration is not the work of this inventor or any other. As long as the photoplays are in the hands of men like Edison they are mere voodooism. We have nothing but *Moving Day*, heretofore described. It is only in the hands of the prophet photoplaywright... that the kinetoscope reels become as mysterious and dazzling to the thinking spirit as the wheels of Ezekiel in the first chapter of his prophecy. One can climb into the operator’s box and watch the sword-like stream of light till he is as dazzled in flesh and spirit as the moth that burns its wings on the lamp. But this is while a glittering vision and not a mere invention is being thrown upon the screen.

The scientific man can explain away the vision as a matter of the technique of double exposures... And having reduced it to terms and shown the process, he expects us to become secular and causal again. But of course the sun itself is a mere trick of light and heat, a dynamo, an incandescent globe, to the man in the laboratory. To us it must be a fire upon the altar.⁹³

⁹² “Visions are not infallible. *They are parables of the day, consolations of the hour.* I think man should use Faith only when he must. Vision is better than Faith, but Experience is better than Vision.” Lindsay, “It May Be, Brother,” *War Bulletin* 3, in PVL 104, original emphasis.

⁹³ AMP 295-296.

The impossibilities of filmtricks onscreen, for Lindsay, thus prove a strategic ally in proclaiming what he believes to be the broader possibilities of film. The battle line between the scientific men and the prophet-wizards is drawn on the matter of visual illusion, and how such sights are to be seen. Against the impulse to make the impossible sights a mechanical joke on our sensibilities, Lindsay urges the importance of seeing them as visions—openly implausible impressions that can defeat the narrowness of speed-mania by calling forth ancient connotations of beauty and myth.

7. Conclusion: on bringing back the primitive

Hartt and Lindsay agree that in their lifetimes social problems have emerged that are without precedent in history and require novel solutions. For Hartt, the problem is humbug or credulity: the speed and spread of information and amusement has far outpaced education, leaving an ignorant populace vulnerable to all kinds of swindles. For Lindsay, the problem is speed-mania: an unchecked desire for the seemingly endless stream of new conveniences made possible by the applied sciences. Both of these critics see a potential solution to these problems of modernity in the trick techniques of early film, but for exactly opposite reasons.

This difference of reasons can be read, to some extent, as functions of the changing perceptions of film technique itself. Hartt's celebrations of substitutions, double-exposures, reverse motion, and other visual wonders for their ingenious exploitations of the technology – exploitations that seemed to demand explanations – are consistent with the technological discourse around trickfilms in the nickelodeon era. By the time Lindsay puts a theory of these

tricks to paper in 1915, he can take the ubiquity of such explanations for granted. Lindsay's effort is not spent educating a reader on how the tricks are performed, but on urging that the tricks be utilized and seen as something *more* than tricks. This something-more is consistent with the new systematic uses to which the techniques were being put, in an increasingly regularized middlebrow art. On the one hand, tricks like double-exposures came to stand in for subjective emotional states or supernatural forces (or an apparent combination of the two, as in *The Avenging Conscience* (Griffith, 1914), wherein the protagonist thinks himself visited by the spirit of his dead uncle and sees various religious figures). On the other hand, the animated cartoon, by systematically applying stop-motion techniques to drawings, allows concerns of character to take precedence; acknowledgment of the trickery becomes more of a framing device than a source of wonder in itself. In both cases, the technology is put to the use of world-making.

However, the difference between the two thinkers in how an illusion is to be taken runs deeper than this. Lindsay's insistence that such a sight should be taken not just as a fictional tableau but as a *vision* – wherein its lack of obedience to our natural laws signals a moral intervention in our world (rather than a clean bracketing-off from our world) – points to a world-view fundamentally opposed to Hartt. This opposition cuts across a number of issues. Hartt and Lindsay came down on warring ends of many deeply-divisive political concerns. Lindsay held to a basic dignity of rural America that was threatened by modern conveniences;⁹⁴ Hartt

⁹⁴ One of the future "proclamations" that closes *Adventures While Preaching the Gospel of Beauty* exhorts tired city-dwellers to flock to the Western farmlands: "You to whom the universe has become a blast-furnace, a coke-oven, a cinder-strewn freight-yard, to whom the history of all ages is a tragedy with the climax now, to whom our democracy and our flag are but playthings of the hypocrite – turn to the soil, turn to the earth, your mother, and she will comfort you." (PVL 205-206) The differences between agricultural labor and urban labor come up again in *The Art of the Moving Picture* as a primary cause of alcoholism's frequency in cities, as compared to the countryside; see AMP 239-240.

mercilessly mocked these regions for their ignorance with ironic disdain.⁹⁵ Lindsay believed that a sense of beauty could be cultivated anywhere and accessible to anyone;⁹⁶ Hartt took the gross failures of lower-class amusements to be evidence of beauty's aristocratic rarity.⁹⁷ Lindsay held a profound admiration for religious fundamentalisms and took much of his professional persona from their practices; Hartt, himself a minister, noted the political dangers of fundamentalism. Chief among these dangers, as Hartt would articulate in later years, was the success of the Anti-Saloon League in passing prohibition.⁹⁸ Lindsay was a longtime member of the Anti-Saloon League, and devotes a chapter of *The Art of the Moving Picture* to the belief that the movie house could replace the saloon in working-class life.⁹⁹

These issues are not so far from the place of visual illusion as they may seem to be. The dividing line can be seen most clearly in each figure's invocation of primitive spectatorship. Hartt calls it "Neolithic" spectatorship, but the basic premise is the same: certain presentations are claimed to call forth pre-modern forms of engagement and belief. For Hartt, primitive spectatorship has two interrelated impulses. The first is the impulse for brute thrills, the momentary sensations found in the amusement-park rides that court death and in the anti-narrative spectacles of melodrama. The second is the impulse to credulity, to take whatever is

⁹⁵ See Hartt, "The Regeneration of Rural New England," op. cit.

⁹⁶ This is a central tenet of the Gospel of Beauty, articulated in his poem *The Building of Springfield* and in his "Editorial for the Art Student Who Has Returned to the Village." See *Village Magazine*, in PVL 149-151.

⁹⁷ See especially his study of amateur artists and musicians, PP 235-275.

⁹⁸ See "Scopes Trial."

⁹⁹ Interestingly, Hartt later opined that the same sort of fundamentalist dangers were behind the outcome of the Scopes Monkey Trial, and his assessment of William Jennings Bryan in his "Scopes" piece is decidedly grim. Lindsay had deeply admired William Jennings Bryan's populism and socialist leanings, and wrote his poem *Bryan, Bryan*, *Bryan* about his loss in the 1896 presidential election.

presented for truth or reality. The impulse to credulity makes the rube attendants at the Dime Museum take Professor Bumpus at his word on the freaks on display; by the impulse to credulity the melodrama audience “absolutely forgets itself,” shouting *Look out!* or *Save her!* at the stage.¹⁰⁰ Both of these aspects of primitive spectatorship, for Hartt, come from a lack of ability to notice contradictions, and this can only be corrected with education. Primitive impulses become contained by a higher-order cognition that *notes* the contradiction and *consents* to it in the form of play, enjoyed for its own sake and insulated from practical consequences. Filmtricks, by their obvious visual contradictions, enact just such an education; their ingenuity provides an *alternative* to primitive spectatorship.

For Lindsay, primitive spectatorship is something more complex. Romanticist in its inspiration, it is thought to operate in the lives of pre-modern cultures as a reverence for the mysteries of a higher-order religious power. The content of the religious power itself is unimportant (Lindsay holds the world’s major religions to rest upon more or less the same spiritual foundations)¹⁰¹—what matters is the act of *living* according to belief. This form of reverence sits side by side with matters of aesthetic judgment: one’s religious inspirations can be chosen on their aesthetic merits. By this logic of admittedly arbitrary choice, religious creeds will differ among groups and individuals as widely as judgments of beauty.

¹⁰⁰ PP 182. This is, of course, not dissimilar to the “Uncle Josh” rube and the myth of cinema’s first audience that supposedly ran screaming from the screen.

¹⁰¹ Lindsay puts this point in different ways, depending on the text. In *A Handy Guide for Beggars* and “The Creed of a Beggar” (in the third *War Bulletin*) he calls God the maker of all religions (PVL 81 and 103, respectively). In *The Art of the Moving Picture* he hints at a more fideist point-of-view regarding religion: “It is my entirely personal speculation, not brought forth dogmatically, that Scripture is not so much inspired as it is curiously and miraculously inspiring.” (AMP 287)

Lindsay concerns himself with the dangers of thrill-seeking as well, which he calls speed-mania, but the impulse to thrills and speed for Lindsay is *fundamentally opposed to* primitive spectatorship. Like the box-car tramp, it is a model of navigation through a peculiarly modern world. Its pleasures are largely made possible by the ingenuities of recent engineers and inventors – realistically-minded, “scientific men,” like the Wright brothers, Samuel Pierpont Langley, Edison, and Hudson Maxim.¹⁰² Modern America’s attraction to the ingenuities, for Lindsay, leads it little by little to put its faith for the future within this narrow, secular realm of incrementally measurable progress and increased convenience: “if every mechanical inventor on earth voiced his dearest wish and lived to see it worked out, the real drama of prophecy and fulfillment, as written in the imagination of the human race, would remain uncompleted.”¹⁰³ When we follow the lead of the mechanical inventor, we do not see enough visions. There is, for Lindsay, a real historical danger underlying the urge to separate a potentially illuminating vision from our world by claiming it to be only a trick of the light or a trick of the eye. Only by *resisting* the urge to see a wondrous sight as merely a double-exposure or a stop-motion trick can a people be made to dream of a truly better future.

The display of illusions thus forces a kind of choice: to either acknowledge them as games or accept in them an unspoken element of mystery. Hartt’s insistence on the pleasures of illusion necessarily entails an abstraction of vision from its object, a place where piecemeal secular advancements necessarily hold sway and limit the possible arena for mystery or religious intervention. Lindsay’s insistence that simple tricks be seen as mysterious moral interventions in

¹⁰² See AMP 264.

¹⁰³ AMP 310. Lindsay finds proof of the emptiness underlying this spirit in the narrowness of secular utopian writers: H.G. Wells, Jules Verne, and even Karl Marx.

the world entails not just a bracketing of the impression as illusion but almost a willful *forgetting* of where the impression came from.

Between these two extremes grew the animated cartoon. The cartoon was something more than a mere prank on the visual faculties but something much less than seeing one's thoughts as visions in the air: a separate aesthetic world in which a number of fantastical things could happen, precisely because it could not upend any assumptions about *our* world. The impression of animated motion was not quite the point, but the axis around which scores of tiny rebellious uproarious instances of free imaginative play could run and fly and bounce and stretch. Some decades later, when the impression would reassert its autonomy in scores of new sensory effects and materials to be moved, the question of illusion would return—not in the form of worldview or politics, but in the form of aesthetics.

Chapter Four

Convincing Movement: Michael Barrier and John Hubley on the Varieties of Animation

1. Introduction

This chapter revisits and expands upon my claim in chapter one that the rise of international multistyled animations, coupled with the decline of American studio cartoons, can be described as a *modernist* development from cartoons to animation. This development made it difficult to describe or criticize new examples of animation in terms that had been previously laid down by the standards of cartoons, precipitating something like a modernist *crisis* in the way that animation came to define itself in America. Warner Brothers had been viewed by many as taking up the mantle of cartoony anarchy and freedom in the 1940s, once Disney had stifled itself into maudlin naturalism;¹ UPA had gained a lot of attention by using flatter graphic stylings and more austere, “adult” subjects to expand the trivialized vocabulary of cartoons as children’s entertainment.² Both of these studios had stopped making theatrical shorts by the early 1960s. International studios (like the National Film Board of Canada in Montreal and the Zagreb studio in Yugoslavia) and American independents, in the meantime, were asserting themselves with ever-stranger movements and combinations of materials; by the end of the

¹ See Manny Faber, “Short and Happy,” in Robert Polito, ed. *Farber on Film: The Complete Film Writings of Manny Farber* (Library of America, 2009), 103-106, and Douglas Gomery, *The American Studio System* (London: Macmillan 1986), 122.

² See David Fisher, “Two Premieres: Disney and UPA,” in Gerald Peary and Danny Peary, eds., *The American Animated Cartoon: A Critical Anthology* (New York: E.P. Dutton, 1980), 178-182, and Gilbert Seldes, Gilbert Seldes, “The Lovely Art: Magic,” in Gerald Mast and Marshal Cohen, eds., *Film Theory and Criticism* (New York: Oxford University Press, 1974), 379-390.

1960s, the “animator” was understood very differently from the way he or she had been conceived in decades earlier.

This moment deserves to be called a modernist crisis, and not merely an emergence of a new modernist *style* of animation. The label “modernist” has typically been applied to the flattened designs of UPA, to distinguish their brand of cartoons as resembling and taking inspiration from twentieth century visual art. Color, shape, and line tend to be emphasized in UPA cartoons, analogous to the ways that Klee, Picasso, Miro, et al. had absolved the illusionist space of their classical predecessors. UPA had explicitly sold itself in the 1950s as a modernist alternative to the idioms of comic strip slapstick and fairy-tale cuteness.³

The rise of what I have called, following Thelma Schenkel, figurative (or noncartoon, art cinema-type) animation,⁴ often bears similar marks of inspiration from twentieth century art, particularly a concern for flatness. However, the change in animation goes farther than this: the artform does not just start to look *more like* modernist visual art, it effectively *becomes* a modernist art, taking on some of modernism’s problems. Characterizing animation as a modernist development of cartoons, which I define here roughly in the sense following Clement Greenberg—as the rigorous testing of the limits of a medium and an unstable impulse toward novelty⁵—allows us to better flesh out the historical element of crisis implicit in an artform that was finding ways around the old trivialities of cel animation. More specifically, there appears a

³ See, for example, Amid Amidi, *Cartoon Modern* (San Francisco: Chronicle Books, 2006), 112-113.

⁴ See Thelma Schenkel, *Exploring the Cinema of Figurative Animation, with Special Consideration of the Work of John and Faith Hubley and Jan Lenica*, PhD. dissertation (New York University, 1977).

⁵ See Clement Greenberg, “Modernist Painting,” in John O’Brian, ed., *Clement Greenberg: The Collected Essays and Criticism, vol. 4* (Chicago: University of Chicago Press, 1993), 85-93. My invocation of novelty in Greenberg’s definition, in light of the fact that Greenberg himself denies that modernism breaks with tradition, is meant to convey the sense of relentless forward momentum implicit in Greenberg’s definition. If a modernist artwork is not qualitatively breaking with a tradition, that work cannot *repeat* that tradition in any direct way either

tripartite crisis: a crisis of criticism or evaluation, a crisis of definition, and a crisis of audience.

In artistic modernism all three of these issues are deeply intertwined as a space of contention and risk within art is practiced. If an artwork discovers something new about its medium, it risks being called bad art, or not even “art” at all, alienating its audience. Similarly, as animators tested the limits of what “animation” could be, incorporating more materials and finding movement in ever-stranger places, the medium drifted farther and farther away from the standards, techniques, and comforts of recognizable cartoons.

The stakes of this drift can be seen most seen in the widely diverging views of two major historical figures along the cartoon/animation divide. On the side of traditional cartoons sat Michael Barrier, editor of *Funnyworld*, which stood as *the* major journal of American animation culture throughout the 1970s. On the side of the new animation stood John Hubley, UPA’s former creative head and one of the International Association of Animated Film’s (ASIFA) most celebrated exponents of new styles. The chief matter of dispute between these two men is what counts as “good” motion. Hubley valued that which calls attention to itself as part of a visual surface; Barrier insisted that motion needed to belong to a consistent bodily character within a world. This chapter will detail the crisis of criticism, definition, and audience in 1970s American animation through contextualizing and analyzing Barrier’s and Hubley’s opposed philosophies of animated motion.

I focus in detail on these two figures (rather than, say, write a general survey of the differences of the visual features of 1960s and 1970s Disney features versus some exemplary ASIFA-style shorts) because they stood at the center of the major forces operating around animation at the time, and commented on those forces in particularly strong, representative, and articulate ways. Barrier was, and remains, the most acute critic of animation in America. He

began *Funnyworld* as a self-published fanzine in 1966; within a few years, the magazine had expanded to include interviews with American studio animators, original historical research, and contemporary reviews, with an informal stable of writers (some of whom, like Milton Gray, were animators themselves). When the Library of Congress held a Disney exhibition commemorating the fiftieth birthday of Mickey Mouse, Barrier crafted the exhibition catalog and had a hand in the selection of exhibit materials. Aggressive debates were fought in the pages of *Funnyworld* throughout the 1970s over the aesthetics, future prospects, and proper way of defining animation (as when Barrier controversially wrote that Frank Mouris was “not even an animator”⁶). That the magazine became a center for such arguments, which frequently included animators as well as fans, is largely a testament to the consistency and eloquent ferocity of Barrier’s style and standards of criticism. *Funnyworld* contained a strongly-held point of view about the value of American cartoons as an art and about the proper mode of celebrating that art.⁷ Late 1930s Disney and 1940s Warner Brothers were relentlessly upheld as the gold standard. Barrier felt that the farther animators strayed from that standard, the less certain a future animation had as a worthwhile art. He spent much of the magazine’s lifetime detailing the strong points of the Golden Age’s plausibly elastic style of cartooning, a style he frequently called “convincing movement”: movement that conveyed a weighted, volumetric personality moving through space.

⁶ See Barrier, “Reviews: Books: Experimental Animation,” *Funnyworld* 17 (Fall 1977), 50. John Canemaker replied: Frank Mouris *is* indeed an animator. He is the creator and director of images that are manipulated frame-by-frame. The definition of “animator” is not confined to one who worked for decades in a cartoon factory interpreting other people’s ideas, designs, stories, characters, direction. (“Letters to Mike Barrier,” *Funnyworld* 19 (Fall 1978), 5).

Milton Gray, in the same issue, rebutted: “Not all animation filmmakers are animators any more than every person caught by a newsreel or home-movie camera is an actor.” (5)

⁷ *Funnyworld* was devoted in equal measure to comics, often writing about such luminaries of sequential art as Carl Barks and Robert Crumb, but these materials lie outside the scope of my analysis.

Hubley was deeply interested in the ways that movement could be conveyed *without* being convincing. One of the earliest and most vocal critics of Golden Age cartoons,⁸ Hubley is generally considered more responsible than anyone else for the characteristic style of UPA. In 1968 critic Andrew Sarris called him “perhaps the most prestigious name in American animation.”⁹ Hubley’s career of independently-financed shorts from the late 1950s to the mid-1970s extended his reputation as an innovator and spokesman for a new kind of animation—one which, with the consolidation of ASIFA, Hubley proclaimed as coming into rich fruition.¹⁰

Barrier and Hubley never had an overt argument, but they were clearly in opposite camps regarding the present and future of what would be called “animation.” Their divergence of views concerned nothing less than the illusion of movement itself, and the proper place of that illusion in an animation aesthetic. If an animator refused to integrate a figure’s design with the way it moved (as Barrier accused UPA and Hubley of doing), was the animation merely calling attention to design at the expense of movement? Or was such a gesture better understood as pushing the impression of movement into unfamiliar forms and materials, effectively renewing animation’s original power to wonder at the impossible sight of movement itself? This was the problem around which Barrier and Hubley orbited: a problem that had been unthinkable in traditionally plasmatic cartoons, but unavoidable for figurative animation.

⁸ See John Hubley and Zachary Schwartz, “Animation Learns a New Language,” *Hollywood Quarterly* 1.4 (July 1946), 360-363. Hubley in many ways is building on the reaction against “Disney cute” by audiences and critics that began with *Bambi*. (For more on this backlash see chapter one). However, unlike celebrants of the plasmatic, Hubley does not anoint Warner Brothers as the logical successor, but tries to construct an alternative *to* the familiar elements of plasmaticness. This involves going in the opposite direction of anthropomorphism (drawing humans to look less humanlike, instead of making animals humanlike) and rethinking the role of metamorphosis as a vehicle for abstract concepts rather than a quasi-physical protean body.

⁹ See Andrew Sarris, “How Animated Are Cartoons (1),” *Village Voice* 14.36 (19 June, 1969), 43.

¹⁰ See Hubley, “Beyond Pigs and Bunnies: The New Animator’s Art,” *American Scholar* 44.2 (Spring 1975), 213-223.

2. Earning conviction in a cartoon

The release of *Yellow Submarine* (George Dunning, 1968) was greeted glowingly by the mainstream press as a revitalization of the art of animation, “a funny, fascinating, whiz-bang, untiringly inventive tour de force through everything that has mattered and glittered in the op art, pop art, art nouveau, way out, way in, cool, hard-edge, psychedelic, poster-style, mixed media world of graphics and design over the last decade or so. It is also a glossary of animation techniques, including some perfected just for this film.”¹¹ Even Andrew Sarris’s mixed review was tinged with the sense that the film could not help but signal a new future for the oft-ghettoized form; John Hubley hailed the film’s success as “the best thing that’s happened in our field...since Mr. Magoo bumped into Gerald McBoing Boing.”¹²

Barrier reviewed *Yellow Submarine* in *Funnyworld* in a far more critical light than this, taking the film’s historical importance as an occasion to wonder whether or not animation had a worthwhile future. Barrier’s major criticism was that the film made no effort to integrate its disparate parts into a synthetic whole. Movement is no longer made to be fluid or graceful; it stagnates unfinished on the screen, jagged and flat:

What’s happening on the screen is not animation in the classic sense – convincing movement – but design for design’s sake. The stiff, artificial animation is appropriate in that it never interferes with our awareness that we’re looking at brightly colored, often eccentric drawings.¹³

¹¹ Charles Champlin, “Beatles and Blue Meanies,” *Los Angeles Times* (10 November, 1968), Los Angeles Times West 30-3. The catalog of references is typical of press coverage. See also, e.g., Stanley Kauffmann, “Beatles and Other Creatures,” *New Republic* 159.20 (16 November, 1968), 18 and 32.

¹² Quoted in Sarris, “How Animated Are Cartoons (1),” *Village Voice* 14.36 (19 June, 1969), 43.

¹³ Barrier, “Reviews: Where the Yellow Went,” *Funnyworld* 12 (1970), 38.

In its portrayal of movement and in its overall conceit, the film is all surface. Instead of efforts at character or emotional connection, the film hedges its aesthetic bets on dazzling pictures and visual surprises (especially in the song sequences). This aesthetic, Barrier argues, is the logical conclusion of an already-entrenched “philosophy of cartoon-making” begun in UPA and widely imitated. While such tactics were new to feature-length films, Barrier takes pains to place *Yellow Submarine*’s difference from contemporary animated shorts “principally in the quantity of its prettiness and cleverness, not in its emphasis on those qualities.”¹⁴ This philosophy is so widespread that, for Barrier, a condemnation of the film could not be separable from a condemnation of contemporary animation as a whole. Barrier singles out Hubley’s work as particularly guilty of the same snobbish self-aggrandizement as *Yellow Submarine*, going into almost as much detail on Hubley shorts as he does on *Yellow Submarine* in a lengthy aside.¹⁵

“Convincing movement” as the standard for animation remains Michael Barrier’s characteristic stance throughout the 1970s, the more-or-less constant reference point by which animation’s history is told and by which any given film is judged.¹⁶ But unlike Eisenstein and Panofsky, who found Disney most lively when his animation was at its most liquid (and closer to the primordial plasma that served as the baseline figure for animation’s appeals), Barrier argues

¹⁴ “Where the Yellow Went,” 38.

¹⁵ “Yellow,” 38-9.

¹⁶ Mark Kausler reiterates this basic idea, complete with phrase “animation in the classic sense,” in a review of Disney’s short *It’s Tough to Be a Bird* (Ward Kimball, 1969):

The conclusion of [*It’s Tough to Be a Bird*] is in *Yellow Submarine* – Stan VanDerbeek – *Laugh-In* style, using old illustrations, toys, advertisements, and even split-second clips from old *Silly Symphonies* to make up an abstractly hilarious sequence. Many of the gags would have been censored if Walt Disney were still around, I’m afraid. It’s food for the spirit to see [longtime Disney animator] Ward Kimball really get the crazy things out of his head onto film. Although *this is not animation in the classic sense*, I thoroughly enjoyed it. (Kausler, “Giving ‘em the Bird,” *Funnyworld* 12, 40, emphasis added.)

for the superiority of Disney's mid- to late-1930s work, when the principles of squash-and-stretch animation became codified.¹⁷ Squash-and-stretch was developed to give characters more definition and body than they had been given in the earlier style of "rubber hose" animation, which had dominated cartoons up to the mid-1930s. Rubber hose animation drew character limbs as limp circular tubes and bodies as weightless circles, distending them infinitely and at will as if a character was holding extra volume and mass in mysterious fourth-dimensional reserve. Squash-and-stretch adheres to and exaggerates a kind of reality principle, based on the fact that living creatures' flesh and musculature subtly changes shape as it moves, according to gravity and momentum. Animators at Disney were often trained on the basics of squash-and-stretch by animating a bouncing ball, flattening the ball when it hit the ground and elongating its shape before and after the hit to give "more snap to the action."¹⁸ Under forces of external or self-directed movement, characters' bodies would deform according to the "pull" of the force (squashing or stretching), then snap back into shape. Animators were encouraged to think of characters as half-full sacks of flour, with mass that had to go somewhere every time the character was moved.

Squash-and-stretch was developed toward a larger goal of Disney animation that Disney animators Frank Thomas and Ollie Johnston call "audience involvement," or empathy for characters. The goal of empathy makes it necessary for the animator to hone his craft beyond the scope of the draftsman or graphic designer and "[add] the disciplines of the actor and the theater."¹⁹ Disney's animators were led to create a homology between character and audience

¹⁷ See Frank Thomas and Ollie Johnston, *Disney Animation: The Illusion of Life*, (New York: Hyperion, 1981), 47-69.

¹⁸ Thomas and Johnston, 51.

¹⁹ Thomas and Johnston, 16.

which the audience can recognize, which, in turn, makes the emotions of dramatic development possible: “The *audiences* will make our little cartoon character sad—actually, far sadder than we could ever draw him—because in their minds that character is *real*.”²⁰ Obviously the term “real” does not function in a literal sense here, but the example of an audience *saddened* at a character (and not laughing at one) is instructive; it indicates a goal of provoking emotions that are congruent with those expressed by a character, rather than laughter at incongruities.

Barrier shares with Disney’s own animators a sense of nobility and admiration in accomplishing this goal. In his catalog for the 1978 Disney exhibition at the Library of Congress he writes that “until *Snow White*, animation’s vocabulary was incomplete; after *Snow White*, it was possible for animation audiences to make audiences laugh *or* cry.”²¹ Barrier describes as a high point of animation’s history the moment “when the Dwarfs are gathered in mourning around the apparently dead Snow White. The Dwarfs’ grief...is very convincing, especially Grumpy’s. He is crushed almost beyond endurance, eyes wide with horror and disbelief.”²²

These feats are achieved partly through mastering the physiognomy of human expression—that is, through caricature. In his review of a film said to fail because its character

²⁰ Thomas and Johnston, 19, original emphasis.

²¹ Barrier, “‘Building a Better Mouse’: Fifty Years of Disney Animation,” reprinted in *Funnyworld* 20 (Summer 1979), 15.

²² “Building,” 15. Barrier goes on to define Disney’s most powerful demonstrations of its powers by its “moments of sorrow” in the early feature films: the mother-son reunion in *Dumbo* (Ben Sharpsteen, 1941), the death of Bambi’s mother (16).

Note that these are the sentiments that turned Panofsky and Farber sour on Disney. Barrier instead sees in these moments an adult sensibility toward the emotions being portrayed, one that could have been developed further into more complex styles and characters (but which was cut short by a lapse into formulaic cuteness during World War II).

animation never develops, Barrier approvingly quotes an observation made by art historian E.H. Gombrich on Rembrandt's portrayals of personality through facial expressions:

[Gombrich] noted that "those distinct emotions which figure in the ancient manuals of painting and acting as the 'passions'...are only simplified abstractions out of the infinite gamut of fluctuating and ambivalent emotions that make up the life of the soul." By contrast, he continued, "Rembrandt entered into an uncharted region of the soul where these descriptive terms lose much of their meaning...Rembrandt learned how to be indefinite without being vague."²³

Barrier's reliance on a passing remark in Gombrich's much-longer article indicates a deeper similarity between his critical project with Gombrich's own: the esteemed art historian's original review goes on to relate Rembrandt's skill with faces to his skill in suggesting space.²⁴ The kind of Disney "realism" that Barrier holds in such high esteem is not quite a slavish imitation of the physical world. He instead values something like *illusionism*, understood in the spirit of Gombrich: a visual code conveyed from the artist to the viewer, drawn both from the natural properties of a medium and a shared tradition.²⁵ Viewers look, in a sense, *through* the code to a

²³ Barrier, "Reviews: *Metamorphoses*," *Funnyworld* 19 (Fall 1978), 50. The film being reviewed is *Metamorphoses* (Takashi, 1977); for Barrier it functions as a perfect example of what *not* to do in creating facial expressions.

²⁴ The article to which Barrier refers is a review of a slew of retrospective texts on Rembrandt for the 300th anniversary of his death, "Rembrandt Now," in *New York Review of Books* 14.5 (12 March, 1970), <http://www.nybooks.com/articles/archives/1970/mar/12/rembrandt-now/> (last accessed April 21, 2012). Gombrich continues:

Indeed [Rembrandt's] pictorial explorations of the chiaroscuro...are the perfect metaphor for his expressive means. And *just as his light clarifies a spatial situation* by a most unexpected stroke, so his pen or brush may *bring out the expressiveness of a face* not through the conventional signs of a smiling mouth or a wrinkled brow, but by the way the cheekbone indicates the structure of the head. (emphasis added)

This remark expands on a point made in *Art and Illusion* on the liveliness of Rembrandt's facial expressions exemplified in his sketch for a lost drawing, "The Disciples at Emmaus." Comparing an original sketch to a copy made by another artist, he writes: "[T]he copyist has coarsened and overdramatized Rembrandt's mysteriously subtle art. I know few more moving illustrations of a conflicting emotion than the rapid study for one of the disciples in whom fear is just giving way to the joy of recognition." See *Art and Illusion* (New York: Phaidon, 1959), 346. The remark is, not coincidentally, contained in a chapter on the problem of caricature, and he attributes a similar power to Disney (335).

²⁵ See Gombrich, *Art and Illusion*. I take the label of "illusionism" to describe Gombrich from W.J.T. Mitchell, "Illusion: Looking at Animals Looking," in *Picture Theory* (Chicago: University of Chicago Press, 1994), 329-44.

character in a situation. Within limits, the techniques of illusionism can accumulate and correct themselves over time, such that viewers are invited to effortlessly dwell inside an image as a possible world. The caricaturing of personality, in Barrier's picture of successful animation, must work in tandem with a set of consistent physical forces. In order to have a convincing *soul* (one that makes an audience laugh *or* cry), a character must have a convincing *body*. To have a convincing body, a character must be subject to at least some plausible laws of physics. Successful characters do not *conquer* their world but *inhabit* it, subject to its peculiar regularities and contingencies. This, for Barrier,

is the great middle ground of animation—the “plausible impossible,” as Disney called it, where impossible characters’ impossible movements are made convincing through smooth and natural movement. This is the ground occupied by the great cartoons of Disney, Avery, Jones, Clampett, and all the other superb craftsmen of the thirties and forties.²⁶

The last point is important: great animation means not only Disney, but a number of Warner Brothers animators who also understood the rules of convincing movement. Chuck Jones, for instance, is noted for emphasizing poses, rather than movement from pose to pose. This tactic gives his cartoons “an underlying serenity, [whereas Bob] Clampett’s and [Jack] Kinney’s are full of restless energy.”²⁷ Jones, for Barrier, is as successful in his approach as Clampett or Kinney, because “both [the emphasis on poses and on movement] rely on the tension between poses and movement. It is this tension that gives the best animation its buoyant, elastic quality—

²⁶ Barrier, “Reviews: Triple Feature: *A Boy Named Charlie Brown*, *The Aristocats*, *The Phantom Tollbooth*,” *Funnyworld* 13 (Spring 1971), 40.

²⁷ Barrier, “Jones: *Night Watchman* to *Phantom Tollbooth*,” *Funnyworld* 13, 37.

its life.”²⁸ Barrier’s most careful critical observations tend to arise from this understanding of movement, as suggestive of flexible but plausible forces and interior motivations.²⁹

The value of these lessons forged by Disney and diversified through Warner Brothers is, according to Barrier, all but lost in the contemporary environment of animation, with *Yellow Submarine* being a prime offender of emptiness. *Yellow Submarine* has “stiff, artificial animation” in large part because it holds no tension between its poses and its movements. Barrier describes the movement-pose interaction like a tightly-wound spring; even when at rest, there should appear to be an internal pressure ready to burst into kinesis at any moment. No characters in *Yellow Submarine* contain this coiled buoyancy. Because the Beatles are designed to have such striking and bizarre bodily proportions (enormous feet and legs, small faces), their movements do not give a sense of fluid intentionality but a sense of fixed gears mechanically grinding forward. Disney characters look like moving, living beings who happen to exist within the medium of drawing; the Beatles look like eye-catching designs that have movement artificially imposed upon them.³⁰

The result is “design for design’s sake”: animation that does not exist to serve the suggestion of a world in which we find ourselves, but merely exists to serve itself. Barrier’s mention of Hubley’s work is described along these lines:

²⁸ “Jones,” 37.

²⁹ For instance, Barrier notes that Fritz in *Fritz the Cat* (Ralph Bakshi, 1971) is animated in an inconsistent combination of styles at different points in the film. Sometimes Fritz is drawn in a New York style, “loose and scribbly, a jumble of lines that gives no sense of outlining a solid body;” sometimes he exhibits a California style, “stiff and literal.” The result is that at some moments Fritz “encourages disbelief,” and at other moments he “does not test the limits of belief.” See Barrier, “The Filming of Fritz—Part Two,” *Funnyworld* 15 (Fall 1973), 33.

³⁰ In this respect it is significant that Heinz Edelman received as much press for his designs as George Dunning did for directing. The film’s characters were not even designed with the question of movement in mind; Dunning’s animators had to spend weeks on tests to move them. See Wayne Warga, “*Submarine* Departs Tradition,” *Los Angeles Times* (1 November, 1968), F9.

Hubley's cartoons are highly artificial, making no effort to create an alternate universe or any illusion of another reality. Their whole purpose would be defeated if the viewer weren't constantly aware that he was watching cleverly animated drawings. It's no accident that some of Hubley's cartoon characters have no faces. Faces would call attention to the characters & away from the animator. That would never do, since Hubley's audience has been trained to be more interested in catching all the animator's little tricks than in a well-told story. Cartoons like *Moonbird* & *Yellow Submarine* are little more than animator's (or designer's) tricks, all on display so that the audience can have the pleasure of spotting them. Very pretty, very "interesting," and boring as hell to people who are interested in the techniques of animation only insofar as they reinforce an interesting storyline and make the characters come alive.³¹

Hubley is lumped in with the contemporary graphic animation not only by virtue of the way his films *look*, but because of his role in the historical shift in American animation from convincing movement to flat flourishes. Barrier describes the post-war UPA fashion of flatness more generally as "the revenge of the layout man" against the animator.³²

3. John Hubley's new animation language

In this respect, it is not coincidental that Hubley rose through the ranks of American cartoons as a background artist and layout man—never actually *animating* characters (unlike

³¹ "Where the Yellow Went," 38-39.

³² See Barrier, "John and Faith Hubley: Traditional Animation Transformed," *Millimeter* 5.2 (February 1977), 43. The assumed difference in mentality emerging from the difference in job title is perhaps subtle, but important. Vladimir Tytla, one of Disney's most highly-respected animators, notes in a speech to a Disney drawing class: Sometimes the layout man does not digest the piece of business as the animator will see it. This is no criticism of the layout man, but most of the time I refer to their sketch to see how many figures they have and what the dialogue and story call for; then I reorganize the thing myself to put across a certain thing as I would like to see it, which means the animator must practically stage and do everything besides drawing, accenting, etc.

In other words, Tytla is advising students that the layout men do not always have their attentions toward the mobile liveliness of a scene, and animators sometimes have to fudge the layout man's instructions to properly carry a scene. Barrier's philosophy of cartoon aesthetics sits squarely on the side of the *animator*, and not the layout man. See Tytla, "Class on Action Analysis," in Thomas and Johnston, 549.

Jones, Avery, et al.). Disney was Hubley's first employer out of art school; he submitted backgrounds. Soon after Hubley's involvement in the 1941 Disney strike, he (along with dozens of other artists) found himself making training and instructional films for the Air Force Moving Picture Unit (AFMPU). Unlike Disney, who had spent enormous amounts of time and money retesting drawings and ideas, the United States government's concerns with its animation were based around instructive simplicity and tight budgets. At the AFMPU the animation staff found a need to find alternatives, as well as a freedom to explore their interests in modern European art.

Hubley's generation was particularly excited by the modernists and the possibilities they might hold for the graphic arts. Notably influential was the new book *Language of Vision* (1944), by Hungarian-born Bauhaus designer György Kepes.³³ The book calls for a revolution in artistic principles inspired by the discoveries of modern art and the picture of human nature found in Gestalt psychology. Kepes offers a blueprint of alternatives to classical illusionist painting's obsessions with fixed-point perspective and object-centered representation—obsessions that not only arose from false ideas about the supposed fixity of our experience of the world but helped lead to the dehumanization of experience in the industrial revolution.³⁴ To illustrate a new brand of visual communication that adequately addresses the forces of modern life, Kepes's book sits experiments by Kurt Koffka and quotes on the theory of vision by Helmholtz and Wolfgang Köhler beside paintings by Picasso, Mondrian, and El Lissitzky, as

³³ Gene Deitch, one of the animation staff at the AFMPU, claims: "We were heavily influenced by two Hungarians and a Russian: graphically by György Kepes and his book, *The Language of Vision* [sic], story construction by Lajos Egri and his book, *The Art of Dramatic Writing*, and cinematic scenography by V.I. Pudovkin in his book, *Film Acting*." Quoted in Amidi, 8.

³⁴ "The Renaissance, which re-discovered the rules of [linear] perspective, had awakened economic forces which led to an interest in every facet of understanding and control of nature. ... [This interest] was breaking into the human sphere and destroying it. He became a machine, or a part of a machine. Man was losing his status as an individual. *In his own life, the illusory laws of individual perspective were being destroyed by uncontrolled mechanism.*" Kepes, 93, emphasis added.

well as print advertisements. In vigorously utopian prose, Kepes proclaims that a new kind of visual art, re-oriented toward the dynamic qualities of geometry, line, color, tone, and rhythm, will reinterpret the world for a population confronting dynamic modern problems.³⁵ By tapping into the natural human need for balance and unity, “this new language can and will enable the human sensibility to perceive space-time relationships never recognized before.”³⁶ Kepes credits various modern art movements for adding to the new visual language. The Cubists, for instance, are said to be responsible for discovering the need to simplify representations of objects in proportion to the increased complexity of perspective.³⁷ But the high-modernist –isms eventually came to suffer from a fetishization of the “sensation of space” without regard to its uses.³⁸ According to Kepes, the real potential of social transformation through visual communication lay in the possibilities of commercial design, primarily in advertising.³⁹

While Kepes never explicitly mentions animation (and mentions moving pictures only as an example of the shift toward more dynamic cultural imagery), a 1945 essay by Hubley with Zachary Schwartz—two of UPA’s founding members—bears the clear stamp of Kepes’s spirit and ideas, attempting to apply Kepes’s “dynamic” language of forms to their military training films. Even the essay’s title, “Animation Learns a New Language,” betrays a debt to Kepes. Hubley and Schwartz issue an animated call-to-arms beyond the “standard recipe for the

³⁵ “Today the dynamics of social events, and the new vistas of a mobile, physical world, have compelled us to exchange a *static* iconography for a *dynamic* one.” Kepes, 14, original emphasis.

³⁶ Kepes, 14.

³⁷ Kepes, 107.

³⁸ Kepes, 108.

³⁹ See, for instance, Kepes, 98.

animated cartoon”⁴⁰ (consisting of cute animals and slapstick), toward a serious means of popular visual education that utilizes the “unique possibilities inherent in the medium [of animation].” By “unique possibilities,” Hubley and Schwartz mean a difference between the representational assumptions behind a photograph (which can only record a single specific thing) and a drawing (which can function as a symbol for a general concept). The photograph’s specificity in, for instance, “the subtle shades of expression on the face of a resistance leader before a fascist’s firing squad,” may create an understanding of fascism implicitly through a concrete dramatic situation of individuals. Animation reverses this process:

Instead of an implied understanding resulting from the vicarious experience of a specific situation, animation represents the *general* idea directly. The audience experiences an understanding of the whole situation.

Dynamic symbols, images representing whole ideas, the flags, the skulls, the cartoon characters, can explain the nature of fascism in terms of its economic roots, the forces behind it, the necessity for its policies of aggression, its historical roots, its political structure.⁴¹

Animation’s risk of depersonalization, which Disney’s personality animation had worked so hard to conquer, here becomes a virtue. Similar to Kepes’s stress of the utopian possibilities found in the popular medium of commercial art, Hubley and Schwartz seek to put their applied art to social use: animation’s ability to use truly “dynamic symbols”⁴² can, instead of creating *characters*, express *ideas* and promote understanding.

The essay’s examples of this new language are mostly confined to simple tricks of metamorphosis: transformative puns (“What do you think I am—an octopus?”), literalizations of internal emotions (a protective person momentarily morphing into a proud knight), symbols of

⁴⁰ Hubley and Schwartz, “Language,” 360.

⁴¹ Hubley and Schwartz, 362-363, original emphasis.

⁴² Hubley and Schwartz, 362.

cause-effect relations (“ballots turning into guns, books to poison, plowshares to swords, children changing to soldiers, soldiers to graves”).⁴³ But note that, like Kepes’s observations on the Cubists, Hubley and Schwartz’s emphases *necessitate* a simplification and schematization of forms in order to create more complex experiences.

Hubley explicitly discusses “Cubist” possibilities for animation in an article written in 1975 (two years before his death), “Beyond Pigs and Bunnies: The New Animator’s Art.” While Hubley remained deeply concerned with the use of dynamic symbols to represent scientific processes and emotional states, much had changed in thirty years. “Language” had situated the social and aesthetic possibilities of animation within the context of AFMPU solving problems of instructing wartime American audiences and soldiers; “Beyond Pigs and Bunnies” draws its inspiration from references to twentieth century European art (which are totally absent from the former essay). In the essay, Hubley offers an imaginary exercise of how to draw a dog in two idioms: cartoon/cute idiom, and Cubist idiom. The demands of cartoon conventions on a dog severely limit its potential as an expressive figure; the artist can only rely on broad, caricatured reductions of recognizable poses and facial expressions. A Cubist portrayal stays close to the basic elements of line and shape, utilizing the inherent “potential energy” of those tools to literally break the dog apart into a barely-held-together collage of aggressive fragments. Paradoxically, Hubley claims that the Cubist method allows for a greater range of expression and subtler registers of effects:

Imagine our bulldog as a cubist image. His teeth and jaws are enlarged and twisted to a profile. His barrel chest is dissected by planes, exaggerating his metallic volume and sturdy legs. Now imagine this image animating in space and time. His jaws and teeth enlarge toward us independently of his head, symbolizing a subjective overcharge of

⁴³ Hubley and Schwartz, 363.

power and sharpness. The bones in his chest dilate as if x-rayed. His eyes precede his head.⁴⁴

Hubley notes that this scenario, “dog chases cat,” remains within the “comic-strip idiom,” but for my purposes what matters in this thought experiment is where the concern for movement goes. Each *part* of the dog can be animated in an interesting way, seemingly independently of the whole figure, to characterize the dog. Hubley shows no concern at all for how the *whole* dog is supposed to move. The design is in fact so far removed from animal behavior that there seems to be no “correct” way to move it. It doesn’t need a center of gravity, it doesn’t need to rear back and anticipate before it makes a lunge. Hubley takes Cubism as a license and rough guide for flattening a figure out, for letting it hang together only by the contiguity of its moving parts. Unlike the weighted balances of volume and interior psychology in Disney realism, the vocabulary of movement is brutally simplified and brought to the surface, predicated on an awareness of graphic forms rather than intense diegetic absorption. While Cubist paintings hang together through composition and balance, jettisoning issues of weight or volume for more purely pictorial qualities of color and tone value, Hubley’s *interpreted* Cubism-in-motion, applied only to a dog and not to a whole scene, is held together simply by the dog’s being in motion. The schematized abstractions at which Hubley had hinted for animated *processes* in “Language” are accentuated, and they apply down to the level of character. Instead of a whole man temporarily turning into an octopus to express his frustration, Hubley imagines a figure whose jagged body parts are constantly at war with each other, flattening and abstracting the character in ways that had previously only applied to a scene: cues deliberately mismatch each other to form a more expressive picture.

⁴⁴ “Beyond Pigs and Bunnies,” 219.

The change in Hubley's chosen example from "Language" to "Pigs and Bunnies" arises from the altered context in which he situates himself: a flourishing international community of animators that had only recently begun to exist. UPA's rise had been meteoric, achieving success almost overnight with *Gerald McBoing Boing* (Robert Cannon) in 1950, but its fortunes fell swiftly with its staff falling under suspicion of the House UnAmerican Activities Committee. Upon the suggestion of Disney, called as a "friendly witness," the Committee placed UPA under investigation;⁴⁵ Hubley, once a card-carrying member of the Communist party, was asked to resign from the studio. He started his own small studio in Los Angeles making commercials, but was blacklisted and struggled to find steady work. Eventually one of his staff, Faith Elliott, convinced him to move to New York; they married and started anew, and from 1957 onward, made a short animated film every year.⁴⁶ Often funded by commissions or with the couple's own money from commercial work, the Hubleys' shorts took on a radically different, much rougher look than any UPA work had done.

The pair was exemplary among American animators in ASIFA. Formed in the wake of the first International Festival of Animated Films in Annecy, France, ASIFA formed a social hub of animators who had otherwise been separated by national industries and traditions (often on one or the other side of the Iron Curtain). The organization worked to promote the medium of animation as a polymorphous, international phenomenon. Norman McLaren was the organization's first president. ASIFA's newsletter was printed in Poland and included a portion of its charter on every copy:

⁴⁵ See "The Testimony of Walter E. Disney before the House Committee on Un-American Activities," in Peary and Peary, 92-98.

⁴⁶ See Pat McGilligan, "Faith Hubley: An Interview," *Film Quarterly* 42.2 (1988), 7-9.

Purpose and programme, article 2:

1. In the spirit of a worldwide cultural movement for progress in the development, dissemination and knowledge of animation, the purpose of this association is:

a) to establish worldwide communications between all who are professionally concerned with animation (directors, producers, administrators, scriptwriters, technicians, artists, designers, animators, composers, film critics and historians, etc.) to help promote satisfactory solutions to their creative, aesthetic, economic, technical and other problems through the exchange and circulation of information, of films and film makers;

b) to inform government organization and the public of the importance of animation, in order to promote a more enlightened appreciation of this art form. This is to be done chiefly through a wider dissemination of films and information throughout the world.⁴⁷

A large part of this promotion of international animation involved challenging the dominance of American cartoons, and Disney in particular. Hubley's narrative throughout "Beyond Pigs and Bunnies," wherein a new international generation of graphically-minded animators usurps Disney's aesthetic dominance (told through an imaginary anecdote of Disney's frozen corpse coming back to life to view the 1975 Zagreb animation festival and leaving horrified) essentially recapitulates a history published thirteen years earlier by Hungarian-born British animator John Halas with Roger Manvell, in their book, *Design in Motion* (1962). Halas (who eventually served as President of ASIFA) argues that recent decades had seen the dominant model of animation, derived from comic strips and illusionist painting, gradually give way, all over the world (he offers examples from 27 countries), to principles found in modernist painting—namely, exaggerated styles of expression and the tendency toward flatness:

Animators have tended in recent years to make a virtue out of simplification and stylization. They have reduced their figures to a few suggestive, mobile lines, and given them appropriately artificial forms of movement. The result has been the introduction of much new and highly imaginative work in animation coming from studios in many different parts of the world. ...A generation of artists is developing now which is bringing a new sense of design to the rapidly expanding field of graphic animation.⁴⁸

⁴⁷ Printed in *ASIFA Nouvelles* 1976.1 (1976), back cover.

⁴⁸ Halas and Manvell, *Design in Motion* (New York: Hastings House, 1962), 20-21.

Halas, in effect, argues that animation has mimicked, and should continue to mimic, the history of painting. As painting has followed a progression from seeing its canvas as a window to a decorative surface, so has animation progressed from caricatures and storybook illustrations toward design-in-motion. Animators are not obliged to imitate movements they see in life. They can instead use tools of twentieth-century art to find movements adequate to the more basic sensory variables of color, line, and shape.

The Hubleys' independent work instantiated these values exceptionally well. Their films were celebrated for more or less the same features that Barrier decries: self-conscious explorations of drawing technique which keep the visuals opaque and at the surface. Halas notes the Hubleys' major contribution to animation art as the elimination of hard outlines in drawing.⁴⁹ Outlines in traditional cel animation separate colors in characters and separate characters from the background, giving the sense of a character as an integral whole and effacing evidence of the animator's activity. The Hubleys abrogate all this, typically leaving every stroke visible. One gets a sense, especially from the Hubleys' early work, of a basic transformative joy of a line in the middle of being formed, keeping in mind all the possible ways that the line could resolve without ever coming to a fixed solution.⁵⁰ The protagonist of their first film, *Adventures of an ** (1957), is an unruly child modeled on an asterisk, drawn with what appears to be wax and left with tiny holes in its white shape. Characters are separated from the background by double-exposure, which gives them a ghostlike quality, as if made of some ethereal material fundamentally different from their surroundings. *The Tender Game* (1958) features a romantic

⁴⁹ Halas, 82.

⁵⁰ In some ways their early work literalizes Paul Klee's oft-cited remark that drawing is "an active line on a walk moving freely, without goal." See Klee, *Pedagogical Notebook*, trans. Sybil Moholy-Nagy (London: Faber and Faber, 1968), 16.

couple made up of a rudimentary set of paintstrokes with gaps between them; the legs of the “man” sometimes get away from him. When characters walk in front of background objects, the gaps in their figures don’t allow the distant objects to show through; the effect is that a piece of the background object temporarily disappears (rather than simply being occluded). Squash-and-stretch principles are applied to characters’ movements—little * flattens just a little bit at the moments he hits the “floor” while bounding around the house—but since these are not closed forms, the kinetic distortions are conveyed by the mere and obvious shortening, lengthening, or curling of lines. The result is a strangely-placed tension. It is felt not between pose and movement but between the physical dimension suggested by the springy forces at work within the figures and the aggressively insubstantial quality of the figure’s design—a mere tangle of strokes, with none of the accustomed allowances made for a solid figuration of those lines (solid color and outline, clear division and connection of body parts, or clear figure-ground separation).

The techniques in the Hubleys’ 1960s work vary considerably: from short to short, from character to character within the same short, and even from moment to moment within the same character. As John Hubley tells it,

[In *Adventures of an **] we wanted a graphic look that had never been seen before. So we played with the wax resist technique. We ended up waxing all the backgrounds and spraying them and double-exposing them. ...It photographed with a very rich waxy texture, which was a fresh look. That film hit European animators like a bombshell and pow!, it set them on fire. For a while that little * became a symbol in Europe of the breakthrough for animation. From that point on, artists started exploring millions of different graphic techniques. So for our own films after that, it was always the question of finding a slightly different technique.⁵¹

The wax-resist technique was used for *Moonbird* and *The Hole*, then abandoned after 1962. *The Hat* (1964) stacks its characters in loose blocks of solid watercolors, with greys and blacks swirling within what are supposed to be solid bodies. *Herb Alpert and the Tijuana Brass Double*

⁵¹ Quoted in John D. Ford, “An Interview with John and Faith Hubley,” in Peary and Peary, 190-191.

Feature (1966) slaps a dozen scribbled characters on to a blank white background. A Spanish Flea is drawn in outline with a fine-point pen; a fat businessman has a line-drawing face over a watercolor torso whose blue jacket bleeds liberally over the linear suggestion of arms and waist, with his legs a pure watercolor blot devoid of any outlines.

Holding together the eccentricities in these shorts is an abiding concern for traditional American principles of figure and movement. With whatever materials of choice, characters still typically bounce in rubber-ball tension from accented pose to accented pose, often with comically exaggerated faces and body contortions. *Windy Day* (1968), the peak of the Hubleys' stylistic recklessness, absolves even these techniques. The short documents the two Hubley daughters, Emily and Georgia, playing various pretend games (the girls were recorded for several hours of playtime and the footage condensed⁵²). The animation follows the lead of the girls' imaginations by metamorphosing each girl once she pretends to be something else. For instance, Emily tries to put on a medieval play that turns her into a prince and Georgia into a queen: Georgia breaks the rules of the play by talking like a baby, and the animation accordingly swaps her queenly form for a diapered infant. The girls go through a staggering number of speedy changes, with no attempt at maintaining any integrity from form to form. Baseline drawings of the girls alter into giraffes, dragons, rabbits, etc., in strokes of what appear to be markers from a Crayola set. Some of the forms plainly look like children's drawings, with all their attendant crudities of weightless unstable outlines and asymmetrical limbs.⁵³ These oddities move and change shape with considerable speed but no bounce. They make sense *only*

⁵² See Thelma Schenkel, *Exploring the Cinema of Figurative Animation, with Special Consideration of the Work of John and Faith Hubley and Jan Lenica*, PhD. dissertation (New York University, 1977), 125.

⁵³ These in fact *are* based on children's drawings; the Hubley girls are credited with some of the animation. See Schenkel, 135.

as a set of colors and lines imitating ideas. Metamorphosis is clearly the main attraction here, but the things moving are so insubstantial and their movements so nonspecific as to scarcely matter, except as accompanying illustrations of a conversation. The “power” to metamorphose clearly belongs to a pair of unseen voices far removed from what we see. *Windy Day* does not offer a window to a world of lively mobile forms (as in *Duck Amuck*, an exercise in metamorphosis that keeps Daffy in his own world of neat lines and solid colors): it measures the distance between the thick unchanging world of the Hubley girls and moving strokes of color on paper.

4. Repudiating the audience

Throughout the 1960s and 1970s, the Hubleys stood for a particular kind of animation: a recklessly experimental exploration of materials and forms that continued the postwar graphic protocols of color and line. For ASIFA, this largely meant undermining the illusionism by which Disney had dominated public understanding of animation all over the world and utilizing the unique properties of animation as a social tool. For Barrier, repudiating the holistic integrity of animated worlds and characters only fetishized the process of production at the expense of the animation itself.

This emphasis on process, according to Barrier, has dire consequences for any potential audience of the work—particularly for an audience’s ability to enjoy such work or judge its quality. In order to appreciate a piece of contemporary animation, audiences had to spot the animator’s tricks; a point evidenced, for Barrier, by the lack of faces in Hubley shorts. While

this is factually a mistake on Barrier's part⁵⁴ – Hubley characters almost always have visible faces – the sentiment is accurate and potent. The appeal of a Hubley cartoon is not *found* in the faces; expressions of characters do not orient us in any significant way. Instead we are repeatedly directed back to the hand of the animator. Distractions from what Barrier sees as the soul of animation are everywhere: one is drawn to the texture of the backgrounds, to the ghostly superimpositions of figures, to seemingly unmotivated pans across static backgrounds, to the coarseness of the colors, but never *into* a space onscreen.

Barrier argued for upholding classical standards not only in his film reviews but in the reviews of various books that celebrated non-cartoon animation. He takes to task in particular a how-to book by Kit Laybourne, *The Animation Book*. Laybourne's stated purpose is to inspire casual readers with no training in animation to become animators—not through learning to draw, but through exploring the wide range of animation techniques thus far discovered (mostly by contemporary animators). The book is less a training program than a grab-bag of quickly glossed options. The goal is for a reader to find his own preferred technique to explore:

For animators, one of the richest sources of ideas comes from the material of animation itself. This will become evident as you study and try your hand at the twenty-odd animation techniques discussed in this book. You will discover, for example, that the character of sand being moved across a white sheet of Plexiglass will produce its own ideas. And so it will be as you animate other objects, as you work in clay, draw on registered paper sheets, combine collage imagery, or design a cutout character. Every material has unique characteristics and potentials and these must be exploited fully by the film artist.⁵⁵

⁵⁴ Milton Gray later corrected him and Barrier conceded that in the moment he must have been thinking of a non-Hubley commercial. See "Letters to Mike Barrier: from Milton Gray," *Funnyworld* 13, 53.

⁵⁵ Kit Laybourne, *The Animation Book* (New York: Crown Publishers, 1979), 11.

While Barrier admits that the book is, “as far as I can tell...an accurate and comprehensive guide to what a beginner needs to know,”⁵⁶ he spends the rest of his review attacking the book’s implied “esthetic point-of-view”⁵⁷ by way of its preface, written by New York independent animator George Griffin.⁵⁸ Griffin and Laybourne encourage a spirit of animating that demands working through materials up close to find options that force, in Griffin’s words, “a reclamation of [the animator’s] authority that contrasts sharply with the impersonal assembly-line production of the studio system...”⁵⁹ Barrier argues that the book is clearly taking advantage of the anti-studio spirit in animation, seeking to undo the hard-won achievements of the Golden Age by the assumption that “self-expression is somehow basic to artistic integrity, or perhaps synonymous with it, even if the self that is being expressed is made up of nothing (so far as we can tell from the films themselves) but childish arrogance or sexual hysteria.”⁶⁰ Barrier charges animators like Griffin with protecting themselves from proper judgment (which would imply the possibility of rejection) by demanding that their work be held by no standard but “one that the artists carry around inside their own heads. There are plenty of independent animators whose work needs the

⁵⁶ Barrier, “Reviews: Popular Mechanics,” *Funnyworld* 22 (1980), 46.

⁵⁷ “Popular Mechanics,” 46.

⁵⁸ Griffin served as an informal spokesman for independent American animation during this time. He assembled *Frames* (Montpelier, VT: Capital City Press, 1978) from an open call for drawings and mission statements by 69 American animators, including Frank Mouris, Suzan Pitt, Larry Cuba, Kathy Rose, Robert Breer, and Caroline Leaf (a native of Seattle, though she was working in Montreal with the National Film Board of Canada). His article “Cartoon, Anti-Cartoon” argues that the current explosion personalized styles are necessary to take back animation’s original creative spirit, and that assembly-line studios no longer form adequate responses to the contemporary moment. See Griffin, “Cartoon, Anti-Cartoon,” in Peary and Peary, 261-268.

Griffin taught animation for a time at the Harvard Carpenter Center for the Arts, itself a major home for independent North American animators; Kathy Rose, Caroline Leaf, and Suzan Pitt also taught there. John and Faith Hubley taught for several years a class at Yale University, “Visualization of Abstract Concepts,” which worked as a testing ground for the premises of many of their shorts.

⁵⁹ Quoted in Barrier, “Popular Mechanics,” 46.

⁶⁰ “Popular Mechanics,” 47.

crutch of ‘self-expression,’ because by any other standards it can only be considered pretentious, amateurish, and obscure.”⁶¹ While Barrier admits that there are exceptions to this impression, even those examples still lack the sense of complete achievement in Golden Age cartoons. The latter were united by a collaborative studio system and a clarity of purpose: to entertain. By comparison, “when I see films by even the most admirable of animators—films like Caroline Leaf’s *The Street* [1978] and Jacques Drouin’s *Mindscape* [1976]—I am struck by how restricted and incomplete they are, compared to the best of the larger studios’ animated films.”⁶²

5. Finding an audience

The concern over audience in relation to standards betrays a deeper anxiety in Barrier’s attitude, and a larger problem of audience for animated shorts: if animation was to survive, it needed *some* kind of appreciative home. (Television’s quick deadlines, tight budgets, and limited movements may have been a home for animators to make a living, but they were not considered a home for the art of *animation*. Television had made the cartoon banal; television

⁶¹ “Popular Mechanics,” 47.

⁶² “Popular Mechanics,” 47. Barrier’s choice of examples is instructive. Both works were funded by the National Film Board of Canada, garnered heavy praise at festivals, and were made in unorthodox, labor-intensive, and potentially bewildering styles—oil colors finger-painted on glass (*The Street*) and the pin-screen (*Mindscape*). Both techniques are rough-edged, offering a richness and variety of texture not visible in cel animation and effectively crowding the screen with minute swirling detail. Interest is typically generated from the materials being moved along the screen to *suggest* rudimentary movements or imaginary fancy or a scene transition (a streak of paint elongates from a lock of hair to form the wall of a room, an arm fades from one shadowy row of pins to another), and not from a clean, motivated movement of a character.

What’s made clear in these aggressively handmade films is not the effortless stride of a figure summoning his internal kinetic forces, but the incredible effort required by the animator to make anything move. The materials make demands of the viewer (sometimes even at a basic level of recognizing things) that cartoon studios had gone to great lengths to eliminate.

was part of the problem.⁶³) Barrier correctly assesses that the Hubleys enjoyed an exemplary reputation within a very small sphere of viewership—fellow-animators and animation buffs—but no real *public* appeal, in the sense that the Golden Age cartoons were once able to capture an audience.⁶⁴ But unlike painting and sculpture, few members of the general public so much as got to read about a Hubley film. Animation had no apparatus of criticism and no market analogous to the plastic arts' rarity and prestige. Nor did animators have the mechanisms of regular exhibition enjoyed by feature films. The new international aesthetic model of animated art was entering its prime just as the theatrical short cartoon was dying. Even *Funnyworld* acknowledged that if there was to be a “new” golden age of animation, it would have to look very different from the studio system under which theatrical cartoons had flourished.⁶⁵

ASIFA was put together, in large part, to solve problems of exhibition for animators' work. (Witness article 2, part 2b of ASIFA's “Purpose and Programme”). Its publications balanced concerns of maintaining an artistic community and of finding an audience *outside* of

⁶³ See Michael Barrier and Bill Spicer, “An Interview with Chuck Jones,” collected in Maureen Furniss, ed., *Chuck Jones: Conversations* (Jackson, MS: University Press of Mississippi, 2005), 38-43. Jones's assessment is very typical. Across the divide of traditionalists (like Barrier and Jones) and modernists (like George Griffin) there was near-universal agreement that, whatever animation had to be, it had to be better than television cartoons. Griffin took television as the logical conclusion of the Disney studio model of animation, proof that the only way to make animation genuine again was to make it independently and personally.

⁶⁴ It isn't difficult to see in Barrier's complaints a parallel to midcentury critics puzzled over the increasingly insular experiments in modernist art, whose cryptic contours were only decipherable to a tiny cult of converts. For a particularly pertinent example, see E.H. Gombrich, “The Vogue of Abstract Art,” in *Meditations on a Hobby Horse and Other Essays on the Theory of Art* (Chicago: University of Chicago Press, 1963), 143-150. For a summary of this development and some of its implications for the concept of art, see Arthur Danto, “The Artworld,” *The Journal of Philosophy* 61.19 (1964), 571-584.

⁶⁵ See Milton Gray, “Perspectives on Animation: A New Golden Age for Animation?” *Funnyworld* 13, 43-45, 54. Gray argues that because of rising production costs and diminishing rentals (partly due to the rise of double-features), the Golden Age of cartoons essentially ended by 1950 – “not because there was no longer a market for good animated cartoons, but because there was no longer a marketplace” (13, original emphasis). Gray sees the potential of a paying audience for animated shorts in the recent success of the Pink Panther character and the Los Angeles County Museum of Art's 1965 exhibition. He speculates that animators may soon be able to reach a niche audience directly through pay television and videotape players.

that small community. Belgian animator Raoul Servais addressed the international nature of this problem in 1978 (pointing to the North American market, despite its decline, as being better off than Europe for having a wide potential audience):

Since animated films are distributed by many companies, there is no planned policy of popularizing the medium in a better way. (This defect could of course be made good by the ASIFA, which should not however replace distributors but supply information to distributors and all interested persons.) But the market in question is insignificant at the moment, except for the United States, where in view of the large size of the country (especially as on the whole Canada is also a part of that market) distribution can be conducted on a large scale. This is not the case in Europe, where no country is large enough to make use of this sector. Moreover, customs regulations do not favor a free flow of films.⁶⁶

The same publication also attempted a regular feature of specific problems and strategies in particular countries, “The Ups and Downs of Distribution.”⁶⁷ John Halas delivered a lengthy report to ASIFA in 1976 on experimental video-disc technology and its potential for animators reaching a wider audience.⁶⁸

Signs of potential success in U.S. exhibition were first indicated by a special ASIFA-sponsored animation program at the Los Angeles County Museum of Art in 1965. The program was multiply-styled and international in scope, beginning with McLaren and Munro’s formalist statement on animation’s open-ended modes, *Canon* (1964). The show also contained such works as George Dunning’s *The Flying Man* (1962)—a two-minute study of movement components taking segmented characters and rough strokes to even further extremes than the

⁶⁶ Servais, “The Animator and His Profession,” *AnimaFilm* 1 (1978), 23.

⁶⁷ See *AnimaFilm* 2 (January-March 1979), 32-34

⁶⁸ See Halas, “The Video-Disc,” *ASIFA Nouvelles* 1976.4 (1976), 31-3.

Hubleys—and Jiri Trnka’s puppet featurette, *The Cybernetic Grandmother* (1962).⁶⁹ Hubley personally introduced the program on its first day, and *The Tender Game* was one of the nineteen shorts on display. Two months later in New York City, Hubley hosted a similar program at the Museum of Modern Art (MoMA), *The Art of the Animated Film*.⁷⁰

While there is no indication that the MoMA show had success comparable to the Los Angeles show, the latter program’s success provided the impetus for a small distribution package called the International Tournée of Animation. A selection of about a dozen films, culled mostly from ASIFA’s major animation festivals (at Annecy, France, and Zagreb, Yugoslavia, with Ottawa added in the mid-1970s), would be compiled for 16mm rental across the U.S. and Canada. The small fee (a 1975 promotional folder gives the minimum charge as \$300 against 50% of gross admissions⁷¹), coupled with the low gauge of the print, allowed for a wide flexibility of distribution. Rather than requiring stays at first-run movie houses, the Tournée could market itself to repertories, college campuses, museums, and film societies. 55% of every show’s net income went to the films’ varied producers. Thus the Tournée relied on a surplus of films produced (already shown at festivals), sustaining itself through minimal overhead and through paying its filmmakers for product without actually putting up money to produce anything.⁷²

⁶⁹ “The Los Angeles County Museum of Art presents its first international animated film exhibition. . .” Exhibition program. Los Angeles County Museum of Art, Dec. 2-5, 1965.

⁷⁰ See John Hubley, moderator, “The Art of the Animated Film” (sound recording: Museum of Modern Art), 2 February, 1966.

⁷¹ *The Tenth Annual Tournée of Animation*, promotional folder, 2.

⁷² See “The International Tournée of Animation” in “The Ups and Downs of Distribution,” *AnimaFilm* 2, 33-4.

For the late 1960s and throughout the 1970s, the Tournée remained the best way for an American audience to view international animation.⁷³ However, while the Tournée was able to survive on a minimum of resources, the low scale of its operations blocked any lasting solution to the problem of finding an audience large enough to sustain production. The shows bought little publicity and earned hardly any press. Charles Champlin regularly celebrated the Tournée in the *Los Angeles Times* (and animation more generally), but other film critics paid the movement little mind. Even Manny Farber, a critic virtually alone among critics championing cartoons in the 1940s, makes exactly one reference to animation over the course of his 1967-1970 tenure at *Artforum*: a casual mention of MoMA's 1968 program of Zagreb Studio shorts, referred to as only "middle European animation."⁷⁴

Barrier makes no mention of the Tournée in *Funnyworld*. The closest he comes in the 1970s to a sustained discussion of non-American animated shorts is a recap of a Zagreb school program at the Kennedy Center in Washington, D.C. (with accompanying lecture by Vlada Petric). Barrier mentions only one short by name (Nedeljko Dragic's *Passing Days* (1969)), and, as with *Yellow Submarine*, argues that the Zagreb style and its reputation suffer from a hollow idea of animation that takes attention away from motion:

There has been a continuing reluctance by many of those who write about animation to let animated films stand on their own feet, and to judge them by appropriate standards.... [A]n animated film is more likely to win approval the more it demands to be judged as something other than an animated film. The more an animated film cloaks itself in the language of other art forms, or in fashionable political or philosophical cant, the more

⁷³ Before the Tournée, exposure to international animation in the United States had been limited to 16mm distributors, who would rent out prints for use in libraries, film societies, or classrooms.

⁷⁴ See Manny Farber, "Film," *Artforum* 6.8 (April 1968), 70. Starting roughly with Hubley's program, MoMA offered occasional animation programs until the end of the 1970s, featuring, among others, Ralph Bakshi, George Griffin, Suzan Pitt, and Jan Lenica.

likely it is to be acclaimed as superior to those animated films that do not conceal their identity.⁷⁵

Of the films themselves, Barrier writes: “[T]here is not really much to say. Zagreb’s cartoons demand acceptance for the ideas behind them, rather than for the cartoons themselves. Most of the films...were clearly derived from the work of UPA and John Hubley...”⁷⁶

Even in the late 1970s when *Funnyworld* expanded coverage to international animation festivals and independent animators, Barrier’s trademark editorial voice and keenness of observation remained conspicuously absent from them. Instead, Barrier focused on the history of American studio cartoons and wrote reviews within the realm of feature film releases and occasional TV specials. Over and over, the features failed to deliver. Once-laudatory Disney releases had long been treading water, and other independent studios or one-time arrangements suffered from sub-Disney banality. What could have been a permanent aesthetic fixture, built on the success of *Yellow Submarine* and *Fritz the Cat* (a resounding success thanks mostly to its X rating), was a litany of false starts. *The Phantom Tollbooth* (Chuck Jones, 1970), Ralph Bakshi’s mid-to-late 1970s work, *Metamorphoses* (Takashi, 1978), *Allegro non troppo* (Bruno Bozetto, 1976), *Raggedy Ann and Andy* (Richard Williams, 1976), *Watership Down* (Martin Rosen, 1977), and others, were more occasions to bemoan the present state of the dying art. The only praiseworthy characteristics Barrier found across *any* of these films were found in *Watership Down*—through the trademark work of John Hubley.

⁷⁵ Barrier, “Reviews: Passing Days,” *Funnyworld* 18 (Summer 1978), 52.

⁷⁶ “Passing Days,” 52.

6. Reevaluating Hubley: illusionism beyond movement

Barrier was not alone in wishing for a steady presence of animation in the world of feature films. Hubley himself had long wanted to break into features, frustrated with the limitations of his audience to primarily educational distribution.⁷⁷ In the mid-1950s he had worked on an animated adaptation of *Finian's Rainbow*, but the project was cut short by his blacklisting.⁷⁸ The Hubleys completed a 53-minute film on the ethical place of human beings in a secular universe based on Harlow Shapley's popular-science book, *Of Stars and Men* (1964), which played for a single week at the Beekman Theater in New York and failed to interest a distributor.⁷⁹ Hubley was briefly and unexpectedly allowed to reach a broader audience in the mid-1970s explosion of animated features when he was asked to direct *Watership Down*. While Hubley was eventually fired from the project, evidence of his work remained in the final release.

The film's prologue, detailing a mythical origin story of the rabbits that the story concerns, is done in an unmistakably flat and colorful contrast to the rest of the film. Self-consciously primitivist in its pictorial scheme, the four-minute miniature fable features nearly-geometric rabbits with conflicting cues of frontality and side-profiles, no hints of volume, depth, or weight (and no indication of how their bodies might shift under a different perspective), and lollipoplike spirals on their front paws and rear legs. The spirals uncoil and recoil whenever the

⁷⁷ McGilligan, 14. Faith Hubley quotes her husband as saying, "I don't want to be an educator. I want to be seen."

⁷⁸ McGilligan, 9.

⁷⁹ McGilligan, 14. The program was filled out with a selection of other shorts from the Hubleys and UPA. Bosley Crowther reviewed the film for the *New York Times*, somewhat backhandedly complimenting that the film was "precisely the sort of picture you might expect to discover at the World's Fair doing shiny-wrapped educational service at one of the science pavilions." See Crowther, "Screen: 'Of Stars and Men' Opens," *New York Times*, 29 April, 1964, 47.

rabbits move. Landscapes are barely suggested, with a sun whose rays are indicated by blobs surrounding leaflike hatchings. Rabbits' movements are kept basic and essentially function as strong graphic illustrations to the voiceover narration. The segment is far more in keeping with the formal logic of a Hubley short than with the typical 1970s imitations of Disney's personality animation.

Barrier reviewed *Watership Down* with a startling *volte face* from his lengthy *Yellow Submarine* aside some years earlier. He writes that the impressionistic prologue features "rabbits, in their few minutes of screen time, who live and die;" the rest of the film, hampered by an unimaginativeness of character, has rabbits who "merely bleed."⁸⁰ Barrier's enjoyment of the film ends with the jarring transition from the mythical metaphoric prologue to "the opening scene of the film itself, in which a badly drawn rabbit twitches an unbelievable nose and blinks an equally unconvincing eye."⁸¹ The review's larger point is to criticize a broad trend of slavish literalism prevalent in feature animation; Barrier goes on to slam Bakshi's extensive rotoscoping in *Lord of the Rings* (1977). In the ways that *Watership* and *Rings* exploit movement, Barrier claims, they do not really qualify as animation—meaning, of course, that they don't trade in "convincing movement."

In celebrating Hubley's style as an inspired break from a droll trend, Barrier seems to be contradicting himself or reversing his position—implying that, by contrast with Bakshi's work, Hubley's figures *do* qualify as convincing movement. Even more puzzling is that Barrier's description of the prologue uncharacteristically remains at the level of design, never discussing the ways the rabbits actually move. How is this style supposed to count as convincing

⁸⁰ Barrier, "Reviews: Going by the Book," *Funnyworld* 20 (Summer 1979), 48.

⁸¹ Barrier, "Going by the Book," 48.

movement, and what did this mean for Barrier's perspective on animation's history and possible future?

An answer suggests itself in a short 1977 article by Barrier for *Millimeter* magazine on the Hubleys, his most sustained engagement with their work. Barrier quickly glosses some technical considerations of the Hubleys' films—their “dazzling variety of techniques, ranging from traditional line animation to the animation of blocks of color to the animation of cutouts”⁸²—but insists that their best work comes from qualities that set them apart from the prevailing spirit of post-studio animation. “Temperamentally—one might almost say ideologically—they are avant-garde, but they have little in common with the frauds and bores who have appropriated that label for themselves.”⁸³ When the Hubleys fail, characters are merely vehicles for abstract ideas, “pretentious and didactic.”⁸⁴ When the Hubleys succeed, “[t]he graphic devices...all serve, in the end, not to explicate ideas but to *delineate character*.”⁸⁵

For Barrier it is the concern for personality that justifies the Hubleys' technical flourishes, as when the Hubley girls change form at the service of their erratic imaginations (in *Windy Day*), or when a grey outlineless monster erupts from a crying girl's mouth (in *Cockabood* (1973)), paradoxically placing the filmmakers within the very tradition they claim to negate. Formal irruptions, in other words, are valid for Barrier when they enrich the expressive life of a character, essentially acting as an indirect caricature of the character's

⁸² Barrier, “John and Faith Hubley,” 43.

⁸³ “John and Faith Hubley,” 42. It is worth noting that this judgment goes against the prevailing tone of the issue. See, e.g., Thelma Schenkel, “Poets of the Single Frame: Young American Animators,” *Millimeter* 5.2, 34-35 and 68-71.

⁸⁴ “John and Faith Hubley,” 43.

⁸⁵ “John and Faith Hubley,” 43, emphasis added.

interior concerns. Each still included in Barrier's piece, tellingly, depicts the face of a character (in *Cockabooty*, *Moonbird*, and *, respectively). Revising his criticism for the supposed lack of faces in the Hubleys' work, Barrier can only find value in the Hubleys *through* the faces: a hint at a soul which holds together the considerable variations in the surface features.⁸⁶

The Hubleys are judged to succeed *despite* their trademark stylistic recklessness, not because of it. Barrier has no descriptive use for the varied textures and designs put into the Hubley drawings (those things to which the ASIFA and George Griffin would point as innovations). Instead Barrier claims that, *contrary to the Hubleys' own ideas about their work*, their best films carry on the priority of character and world exemplified by Disney. The villains in *Of Men and Demons* succeed because they "are ingratiating scoundrels." The "quicksilver metamorphoses" of *Windy Day* and *Cockabooty* are convincing not because of smooth graphic transformations but because their abruptness fits the transforming characters in such a way as to concretize the whimsy of real children's imaginations.⁸⁷

In order to celebrate the Hubleys, Barrier selects those aspects of their work which fit best into his own sense of established tradition. This requires treating their stylistic idiosyncrasies as diegetically motivated, folding them back into an expanded logic of illusionism. By the same logic some years earlier, Barrier had hedged his bets for animation's future on *Fritz the Cat*. *Fritz* gave Barrier a sense of hope that *Yellow Submarine* did not. In detailed prose over a mammoth two-part article, Barrier claims that Ralph Bakshi's debut film offers a way to mesh together the expressive possibilities of traditional personality animation with those of the newer graphic styles to yield, if not a complete whole (*Fritz* was too deeply

⁸⁶ "John and Faith Hubley," 43.

⁸⁷ "John and Faith Hubley," 43.

flawed to be a total success), at least some extraordinary *possibilities* for fusing form and content.⁸⁸ Bakshi's next film, *Heavy Traffic* (1973), also got praise, notably for the depiction of the protagonist's murder in its use of expressive exaggerations of violence to give death a sting.⁸⁹

In moments of early Bakshi and late Hubley, Barrier saw something from another time: a tradition of illusionism that placed animated characters into a coherent world. When the styles for creating these "worlds" turned deliberately disjunctive—when small moments of wonder flattened out the space once mysterious and humanist—Barrier's picture of animation allows him to evaluate the results in one of two ways: either deride its lack of illusionism for calling attention to itself, or celebrate it under a *different kind* of illusionism, of rules temporarily broken in search of conviction in a film's characters. In both cases, describing the moment becomes unnecessary. Either it's unconvincing (in which case there's nothing more to say about it), or it's convincing in a symbolically expressive way (in which case there's nothing more to say about it).

Because certain configurations of distance and timing from frame to frame will guarantee the perception of movement on film, animation did not need to look "convincing," in Barrier's sense of the term, in order to move. There did not need to be any mystery of character or physiognomy behind a figure, and indications of mass, volume, and depth could be selectively applied (or not applied at all); the impressions of things moving themselves or being moved

⁸⁸ "What is extraordinary about *Fritz* is not that Ralph Bakshi has mixed ingredients from these conflicting approaches...but that he seems so much at ease in doing it. It is natural for him to use 'design' elements in his pictures—abstract and semi-abstract forms, for example, and a freer use of color—but he has also found his way back to traditional animation, because the physical reality of his characters is necessary for the kinds of films he wants to make." Later he states more boldly: "*Fritz* was necessary if animation is to survive....*Fritz*, although it is crude and unpleasant for much of its length, is successful as a demonstration of all that can yet be accomplished in animation—not technically, but artistically." "Fritz Part Two," 33.

⁸⁹ Barrier, "Reviews: With and Without Bakshi," *Funnyworld* 16 (Winter 1974-5), 43.

would still hold. In fact, the *less* convincing the movements looked, the *stronger* the impression of movement asserted itself. It could persist through any number of disparate and contradictory techniques, creating strange new sights with little regard for unity or consistency.

Hubley believed that disparate techniques could be held together by schematizing abstract ideas in the service of secular humanism. His theoretical work on animation's symbolic power tries to rein in flourishes of style by attaching them to recognizable psychological states like fear or anger, or to historical and scientific processes (as in *Voyage to Next* (1975), in which the conflicts between cultures are represented by isolated boxes floating in a vast tumultuous sea).⁹⁰ But, strangely, there is *nothing* in his theories to justify a search for new styles. The watercolor-and-wax backgrounds, the double-exposed figures, the visible strokes that stubbornly assert themselves through pens, crayons, markers, etc., all command an immediacy that resists symbolic characterization.⁹¹ They prioritize the act of perception, in the way that dozens of other contemporaneous animations perform a fascination with their ability to be seen.

⁹⁰ This basic theme, animation's ability to symbolize invisible processes in motion, remains an anchor for Hubley from "Animation Learns a New Language" to "Beyond Pigs and Bunnies." The symbolism may convey unseen psychological states (as in the Cubist dog), or abstract processes with no visible manifestation (competition between religions, interaction among atomic particles, and so on). In both cases, the filmmaker's task is chiefly a matter of choosing the proper symbols that will convey a clear and compelling message.

⁹¹ This is to say that Hubley's stated theoretical goal of symbolizing the unseen operates in a certain tension with the technical explorations of materials in motion. This tension manifests itself in the films. From the late 1960s onward, in films like *Of Men and Demons*, *Eggs* (1973), and *Voyage to Next*, the Hubleys put less emphasis on the exploration of technique and more emphasis on literalizing philosophical or political conflicts. Character mobility becomes limited and varying textures are not explored; the films begin to resemble each other, in a way alien to their earlier work. John Hubley himself notes this tension, attributing it to the commissioned nature of much of the work; see Ford, 192.

7. Conclusion

In 1971, the Academy of Motion Picture Arts and Sciences changed the title of its animators' category from "Best Cartoon" to "Best Short Subject, Animated Film."⁹² At the end of the 1970s, the Academy of Motion Picture Arts and Sciences modified the internal language of its rule to be more specific about what was meant by the term "animated short:"

[A]n animated film, comedic or serious, may be an original story, an existing story or fable, or it may simply explore a mood or thought. It usually falls into one of two general fields of animation: character or abstract. Some of the techniques of animating films include cel animation, computer animation, stop-motion, clay animation, puppets, pixillation, cut out, pins, camera multiple pass imagery, kaleidoscopic effects & drawing on the film frame itself.⁹³

Shortly thereafter, ASIFA wrote out its own definition at the World Animation Festival in Zagreb, conceptually identical:

The art of animation is the creation of moving images through the manipulation of all varieties of techniques apart from live action methods.
Zagreb 6/17/1980⁹⁴

The convoluted AMPAS definition is clearly a product of confusions and disputes, a need to adapt what had once been a simple, self-evident category—cartoons—to fit what AMPAS's members considered the best examples of the animator's artform and which could no longer be recognizable as "cartoons." Its inclusive classifications don't distinguish "animation" from other possible categories but read more like assurances to a hypothetical viewer that seemingly

⁹² See *Rules for the Conduct of the Balloting, 43rd Annual Academy Awards, for Achievements during 1970* (Los Angeles: Academy of Motion Picture Arts and Sciences, 1970), 17-18.

⁹³ *Rules for the Conduct of the Balloting, 52nd Annual Academy Awards, for Achievements during 1979* (Los Angeles: Academy of Motion Picture Arts and Sciences 1979), 19.

⁹⁴ *AnimaFilm* 5.3 (July-September 1983), inside front cover.

aberrant examples *do* qualify as animated shorts: it can be comedic *or* serious, an original *or* adapted story, *or* may tell no story at all; it can contain characters *or* be abstract, *or* be neither in some undefined way. Most tellingly, the definition lists eleven possible techniques that count as animation (some of which confusingly overlap). ASIFA's statement is elegant in its simplicity, riding on the sheer sense of infinite possibility that follows from a single distinction: the manipulation of *all* varieties of techniques apart from live action. No attempt is made to list examples. The statement's vagueness does not emerge from a plethora of terms trying to account for animation that's already happened; it instead is vague for its absolute emptiness of content, pointing to future unforeseen possibilities. There is nothing, it seems by this definition, that cannot be animated. There is only that which no one has yet thought to animate.

John Hubley had a foot in each of these worlds, his pedigree in the former making him that much more valued in the latter. Roger Manvell's "The Art of Animation," printed for ASIFA and charged with the considerable task of presenting a synoptic history of the artform's major accomplishments, lists the Hubleys first and foremost "among the leading animators the United States has produced"⁹⁵ in its newfound prestige from the 1960s onward as a respected art. For Barrier, these changes meant a turning-away from the cartoon's most satisfying emotional powers towards pale imitations of other arts.

In the dizzying environment of varied techniques and effects, the novelty of moving-picture technology thus returns. Shorts as disparate as Francine Desbiens's children's exercise in color-scale instruction, *The Little Men of Chromagnon* (1971) and Suzan Pitt's dreamlike psychosexual odyssey, *Asparagus* (1979), contain a giddiness of possibility in potential types of movement and in potential materials to be moved. *Chromagnon* creates a universe of solid-

⁹⁵ Manvell, "The Art of Animation," *AnimaFilm* 3 (January-March 1980), 12.

colored, alien-eyed eunuchs who inhabit circular homes that sometimes behave like flat patches (as when they overlap to form intermediate colors) and sometimes behave like massive solid globes (as when their inhabitants hide inside them or hang from them). *Asparagus* collides clay figures with drawings and blurred flecks of light in a nonsense stream of events that bear as little connection to each other as the divergent mediums in use. George Griffin argued for the necessity of “personal exercise[s] of the medium in the spirit of the early cartoon pioneers,”⁹⁶ diving into idiosyncratic technical procedures to reacquaint animators with their craft and counteract the American cartoon studios’ alienating divisions of labor. Griffin’s own film, *Head* (1975) is an encyclopedic study of the artist’s own face, animated in a number of ways (pixilation, stick-figure drawing, etc.).

This widespread development took much of its inspiration from aesthetic modernism. More importantly, it brought modernism’s problematic of the *new* to the cartoon. (This was not the same as the arrival *of* the trickfilm and the cartoon, when there was no tradition from which to distinguish the work.) Adorno writes in *Aesthetic Theory* that a large part of modern art’s power is resolutely historical (i.e., dependent upon the situation in which it finds itself), and thus ultimately ephemeral and disposable:

Certain works of art of the highest caliber seem to want to lose themselves as it were in time in order to avoid becoming its prey. This tendency is irreconcilably opposed to the pressure towards objectification. Ernst Schoen once praised the unique nobility of fireworks, the only art that does not want to endure but is content to sparkle for an instant and then fade away.⁹⁷

⁹⁶ Griffin, “Cartoon, Anti-Cartoon,” 263.

⁹⁷ T.W. Adorno, in Gretel Adorno and Rolf Tiedemann, eds., *Aesthetic Theory*, trans. C. Lenhardt (London and New York: Routledge and Kegan Paul, 1984), 42.

By “pressure towards objectification,” Adorno means both the pre-modern fetish-use of art to conquer death and the rampant desire in a consumer economy to possess whatever causes pleasure. From this viewpoint, moments of projected movement that flicker in strange, dazzling ways then disappear, may be seen as elevating the cartoon to a higher form of art by embracing accidental discoveries whose wonder almost by definition cannot be repeated.

However, this dazzling power of the new creates a negative force around it, making that which is *not* new seem inadequate by comparison. Because the sensation of newness cannot last, it must be sought unceasingly. Adorno recognizes that the very value of novelty in modern art is taken from the character of “consumer goods through which they are supposed to set themselves off from the self-same aggregate supply, stimulating consumer decisions subject to the needs to capital.”⁹⁸ In seeking to set itself apart from a vulgar market (where art might be treated just as flippantly as candy or toothpaste or Saturday-morning television), art *acquires the logic* of the market. It must keep creating new demands. It must expand indefinitely, or ossify.

The former trait of modern art—what we might call its secular purity—may help explain why Hubley, and numerous others, believed so fervently in the search for new techniques as coincident with ASIFA’s political missions (the organization’s belief, bluntly put, in animation’s power to change the world). The latter trait—modern art’s disposability—helps explain why a traditionalist like Barrier carried such deep suspicions toward that search for new things. The artist was not really offering recognizable art but selling himself. The flood of newness was only so much evidence that the pictures were without genuine aesthetic content—only, as Adorno

⁹⁸ Adorno, 31.

himself ambivalently notes of the new more generally, “a blind spot, as empty as perfect thisness.”⁹⁹

⁹⁹ Adorno, 30.

Excursus on *Artforum*

Through the examples of *Yellow Submarine* and American independent and international shorts, animation had a portion of the artworld's attention in the late 1960s and throughout the 1970s. At the same time, cinema was intervening in the vanguard of art criticism. *Artforum*, the New York-based center of modernist art criticism in America, published Rosalind Krauss's "A View of Modernism" in 1972. The piece details Krauss's disillusionment with modernist criticism as exemplified by critics Clement Greenberg and Michael Fried, and summarizes a number of changes brewing in the artworld. One of the "anomalies which does not fit...the modernist critical art theory"¹ is film:

[C]ritics have continually balked at admitting film to the status of "modernist art." Given the quality of recent advanced film, this position is simply no longer admissible even for critics who confine themselves to dealing just with painting and sculpture, for film as a medium has become increasingly important to sculptors themselves.²

A year earlier, *Artforum* had published a special issue devoted entirely to film, the explicit goal of which was to force "recognition for an achievement whose importance will eventually be seen as comparable to that of American painting in the 1950s."³

Some critical insight into film theory's historic neglect of animation can be gained from examining these few years in *Artforum*, in tandem with the changes in animation. The problem can be put in the following way: Animation as a medium was grappling with a set of concerns set down by modernist painting. At the same time, art criticism, in a set of gestures that would later

¹ Krauss, "A View of Modernism," *Artforum* 11.1 (September 1972), 50.

² Krauss, 50.

³ Annette Michelson, "Forward in Three Letters," *Artforum* 10.1 (September 1971), 9.

be incorporated into the academic discipline of film studies, was describing *cinema* in terms laid down by modernist painting. The moment, in retrospect, seems ripe for the recognition of animation by film theory. Yet, this did not happen. Problems of animated movement remained more or less invisible. This absence was not a case of merely neglecting a set of examples. (It hardly seems plausible that an entire writing staff at a major art magazine simply forgot that there was such a thing as cartoons.) Rather, the ethos of *Artforum* implicitly did not view cartoons and the new animation as presenting any problems of analysis specific to what the magazine considered a modernist understanding of film.

Krauss's reference to film in "A View of Modernism" indicates the complex nature of film's emergence as an "advanced" art. Not only is the quality of contemporary film said to be undeniable, but film has become inextricably bound up with contemporary *sculpture*: "film as a medium has become increasingly important to sculptors themselves." In particular, Krauss is referring to the development of Minimalist sculpture in the 1960s, a movement devoted to designing superlatively simple monolithic forms. Pieces like Tony Smith's *Die* (a man-size cube, 1962) and Robert Morris's *Untitled (Corner Piece)* (a blank white triangular slab angled in such a way as to sit flush in a gallery corner, 1964) had no surface features or relations among parts from which to draw a traditional critical description: they simply sat there. Minimalist works demanded, by their scale and shape, to be confronted by a viewer, but they remained stubbornly immune to analysis. As such, they precipitated a crisis for modernist criticism as it had developed out of the concepts and methods of Clement Greenberg.⁴ When Krauss charges that modernist criticism has cut itself off "from what is most energetic and felt in contemporary sculpture," coextensive with its refusal to take film as a modernist art, Krauss is undoubtedly

⁴ See Amy Newman, *Challenging Art: Artforum 1962-1974* (New York: Soho Press, 2000), especially chapter 2.

referring to Michael Fried's polemical essay published four years earlier in *Artforum*, "Art and Objecthood."

Fried's essay targets the Minimalist aesthetic in sculpture as ostensibly interested in "objecthood" (the look of everyday objects and our basic sensuous relation to them),⁵ but *actually* interested in, and reliant on, what he calls "theatricality." Theatricality has three main features which distinguish it from the canon of modernist art. First, it consists of a viewer's experience of a *total spatial situation around the artwork*, not an experience of the work itself.⁶ Second, it has a presence that aggressively confronts a viewer; it seems to be unable to stand on its own, it *needs* the viewer to feel its presence in the room (or needs to be, as Fried puts it, "in [the viewer's] way)."⁷ Third, it is obsessed with duration: in order to work, a Minimalist piece needs to create an experience in the viewer that persists in time, that makes the viewer *keep* looking at it.⁸ By contrast, in Fried's privileged examples of "truly" modernist works (like the multipart sculptures of Anthony Caro and the color stripe paintings of Kenneth Noland), the work in question *itself* remains absolutely responsible for its effects on a viewer; it stands apart

⁵ Fried, "Art and Objecthood," *Art and Objecthood: Essays and Reviews* (University of Chicago Press, 1998), 152-153.

⁶ Quoting Robert Morris on the necessity to control "the entire situation" of exhibition (lighting, space, etc.), Fried writes that " 'the entire situation means exactly that: *all* of it—including, it seems, the beholder's *body*. There is nothing within his field of vision—nothing that he takes not of in any way—that declares its irrelevance to the situation, and therefore to the experience, in question. ...Everything counts—not as part of the object, but as part of the situation in which its objecthood is established and on which that objecthood at least partly depends." "Art and Objecthood," 155.

⁷ "Art and Objecthood," 154, original emphasis. Fried defines a work as having presence "when it demands that the beholder take it into account, that he take it seriously—and when the fulfillment of that demand consists simply in being aware of the work and, so to speak, acting accordingly." 155.

⁸ "The literalist [i.e., Minimalist] preoccupation with time—more precisely with the *duration of the experience*—is, I suggest, paradigmatically theatrical, as though theater confronts the beholder, and thereby isolates him, with the endlessness not just of objecthood but of *time*..." "Art and Objecthood," 166-167. Fried notes that Minimalism seeks to give the impression of endlessness, meaning an experience in time that is endlessly interesting.

from its viewer, allowing its viewer to stand apart from it; and it tends to hit the viewer instantaneously, without regard for duration. For Fried, the ethos of theatricality, in its emphasis on experience, amounts to a corruption of modernism's commitment to medium-specificity. As such, Minimalism is, for Fried, unable to earn a viewer's conviction of its place in the history of its medium. Fried even goes so far as to say that modernist art, in order to survive, must *defeat* theatricality;⁹ this goes for the other arts as well (he specifically mentions music and poetry).¹⁰

The "theatrical" qualities of Minimalism, and Fried's broader suspicion that underlies them (that a work of art becomes illegitimate when its effects creep beyond perception of the work itself and into the viewer's broader field of vision and sense of time) bear unspoken but marked similarities to film.¹¹ If "the more effective...a setting is made, the more superfluous the works themselves become,"¹² then film—an art that relies solely on depicting spatiotemporal situations with literally *no* object there (only a projected image and channeled sound)—would seem to be the apex of theatricality. And, indeed, although Fried claims that film "by its nature *escapes* theater entirely" (through a kind of ontological loophole, since the theatrical concept of

⁹ "Art and Objecthood," 163-165. His three major points about theatricality are: "1. The success, even the survival of the arts has come increasingly to depend on their ability to defeat theater" (163); "2. Art degenerates as it approaches the condition of theater" (164); "3. The concepts of quality and value—and to the extent that these are central to art, the concept of art itself—are meaningful, or wholly meaningful, only within the individual arts. What lies between the arts is theater."

The first two are derivations of the third. For Fried's picture of modernist art, quality is all that matters, and quality is measured by an artwork's ability to stand being compared to the best examples in the history of that art. When a work becomes theatrical, it no longer supports such comparisons, and so is unable to earn a viewer's conviction in its quality. Instead, a viewer can only become interested in it.

¹⁰ "Art and Objecthood," 167.

¹¹ In particular, Fried quotes sculptor Tony Smith's anecdote of driving down the then-unfinished and unlit New Jersey Turnpike at night as the paradigmatically theatrical situation ("Art and Objecthood," 157-159): an experience of one's body rushing forward through an environment that swallows one up, an experience *without* any object responsible for it (and hence nothing to which one can point to find voice for its effects; one can only feel it happening). The description reads like watching a virtuoso camera movement in a movie theater.

¹² "Art and Objecthood," 160.

“presence” simply makes no sense as applied to film),¹³ this simultaneously means that film can never *defeat* theater with presentness or conviction in the way that modernist art needs to.

Hence, “the cinema, even at its most experimental, is not a modernist art.”¹⁴

Krauss argues against just this conception of modernism, which neglects the realm of experience; but the connection between Minimalism and film was forged most thoroughly at *Artforum* by critic Annette Michelson. While Michelson’s first piece for the magazine reviewed a Minimalist exhibition,¹⁵ she also had a hand in the burgeoning American avant-garde scene of the 1960s with P. Adams Sitney and Jonas Mekas. In 1966, Mekas’s journal *Film Culture* published her lecture, “Film and the Radical Aspiration,” which hailed experimental American “independent” cinema as the successor to the aesthetically and politically revolutionary project of filmmaking best represented by the 1920s Soviet montage movement.¹⁶

In 1969, Michelson authored two key complementary texts. One was a catalog for Robert Morris’s exhibition at the Corcoran Museum, an apologia for the Minimalist aesthetic as

¹³ “Art and Objecthood, 164, original emphasis. Fried goes on to list various qualities that keep film from achieving presence: “the actors are not physically present, the film itself is projected *away* from us, the screen is not experienced as a kind of object existing...in a specific physical relation to us, etc.” (171N20, original emphasis).

¹⁴ “Art and Objecthood,” 164.

¹⁵ See Michelson, “10 x 10: Reasonable Concreteness,” *Artforum* 5.5 (January 1967), 30-31. Cited in Rosalind Krauss’s preface in Malcolm Turvey and Richard Allen, eds., *Camera Obscura, Camera Lucida: Essays in Honor of Annette Michelson* (Amsterdam: Amsterdam University Press, 2003), 9.

¹⁶ See Michelson, “Film and the Radical Aspiration,” reprinted in P. Adams Sitney, ed., *The Film Culture Reader* (New York and Washington: Praeger Publications, 1970), 404-421. I place “independent” in quotes because this is the term Michelson herself used, to denote the movement’s lack of resources for production, distribution, and exhibition, but the movement never quite coalesced around a single term. Jonas Mekas coined the term “New American Cinema” for it, following the French New Wave; but by the end of the 1960s, the films of which Michelson speaks are more comfortably placed under the “avant-garde” umbrella.

Interestingly, in its early years *Film Culture* devoted occasional space to and mentions of animators like Norman McLaren and Lotte Reiniger, but these references phase out in the early 1960s with the magazine’s increased devotion to the New American Cinema and more rigorously experimental film. Along this latter point especially begins the magazine’s devotion to abstraction and collage filmmaking; among the favorites covered are Robert Breer, Len Lye, and Stan Vanderbeek.

a secular critique of “orthodox” modernism.¹⁷ The other text was *Artforum*’s first full-length article devoted solely to a single film: a five-part extrapolation of Stanley Kubrick’s *2001: A Space Odyssey* (1968).¹⁸ Through a dizzying number of references to other films and other arts, Michelson argues for *2001*’s place at the center of the aesthetic of film; but, more importantly, through the example of *2001* she argues for the central importance of the medium of *film* to modernism. While Fried and Greenberg understand modernism as a discipline of artmaking that tests its own bases—painters who paint paintings that test the conditions of what can qualify as a painting—Michelson argues that modernist self-consciousness finds its way into art when it “takes the nature of reality, the nature of consciousness in and through perception, as its subject or domain.”¹⁹ Conceived in this way, the modernist arts will not become more and more *autonomous* over time (retaining their medium-specificity as per Fried), but become more and more *like human consciousness*.

Like Fried and Greenberg, Michelson asserts modernist art as a philosophical enterprise, a project of testing definitions, probing conditions, and asking questions on a path to self-

¹⁷ See Michelson, “Robert Morris: An Aesthetics of Transgression,” in James Meyer, ed., *Minimalism* (New York: Phaidon, 2000), 248-250. By “orthodox” I mean the tradition of modernist criticism laid down by Greenberg predominantly occupied with pictorial and optical values, best applied (according to Michelson) to Abstract Expressionism. The anthologized version of Michelson’s text (from which all of my subsequent quotes follow) excerpts selections from the original catalog, *Robert Morris: An Aesthetics of Transgression* (Washington, D.C.: Corcoran Gallery of Art, 1969).

¹⁸ See “Bodies in Space: Film as ‘Carnal Knowledge,’” *Artforum* 7.6 (February 1969), 53-64. The coincidence of year and point of the Morris text and the *2001* text are noted by Malcolm Turvey in his introduction to *Camera Obscura, Camera Lucida*, 15. Three themes of my own exegesis on Michelson’s work follow closely Turvey’s discussion of her oeuvre: her overlapping interest in the “advanced” temporal arts (film, sculpture, dance), the importance of philosophical inquiry in art through sensuous paradox, and the opposition of *secular* modernism to what might be called a *nostalgic* modernism (i.e., works and criticism which search for substitutes for religious or eternal values).

¹⁹ “Bodies in Space,” 58.

awareness.²⁰ But Michelson's brand of modernism poses philosophical questions not about its own medium but about human experience, much like experiments in Gestalt psychology, for Merleau-Ponty, test our perceptions.²¹ She describes the stakes of Morris's sculpture as follows: "Cognitive in its fullest effect, then, rather than 'meaningful,' its comprehension not only demands time; it elicits the acknowledgment of temporality as the condition or medium of human cognition and aesthetic experience."²² The relation of art to duration proposed by Fried is exactly inverted: a finite span of time is *absolutely necessary*, and is *all* that is necessary, for a work of art to prompt philosophical speculation and so qualify as modernist. Michelson's definition of modernism is thus *agnostic* toward any idea of medium-specificity, so film cannot be disqualified from a modernist project of art on material grounds. In fact, because film manipulates experience so directly, it becomes a privileged art. Experience itself becomes an artistic medium to be tested, investigated, and discovered.

It is for precisely these reasons that Michelson celebrates *2001*. By altering the spectator's own sense of space, time and movement, *2001* is said to create "a space which

²⁰ See Greenberg, "Modernist Painting," in John O'Brian, ed., *Clement Greenberg: The Collected Essays and Criticism vol. 4* (Chicago: University of Chicago Press, 1993), 85-93. Modern art is said to take from modern philosophy since Kant the discipline of self-criticism: a drive toward absolute autonomy that mimics the autonomy of the moral subject, eliminating more and more of itself that is seen to be inessential to its nature.

In a related way (if more Cavell than Greenberg in its emphasis on estrangement from one's world through doubt), Fried writes of Manet as the first truly modern painter: "Manet is sharply conscious that his own relation to reality is far more problematic [than that of his predecessors Velazquez and Hals]. And to paint his world with the same fullness of response...means that he is forced to paint not merely his world but his problematic relation to it: his own awareness of himself as in the world yet not of the world. In this sense Manet is the first post-Kantian painter: the first painter whose awareness of himself raises problems of extreme difficulty that cannot be ignored: the first painter for whom consciousness itself is the great subject of his art." *Three American Painters*, 49N3.

²¹ Michelson's criticism throughout the 1960s and 1970s is marked by a commitment to the primacy of embodiment as asserted by phenomenology. According to James Meyer, "Michelson's assimilation of phenomenology...dated to the fifties, when she attended lectures by Merleau-Ponty at the Collège de France." See Meyer, *Minimalism: Art and Polemics in the Sixties* (New Haven: Yale University Press, 2004), 297N39.

²² "Robert Morris," 248.

converts the theater into a vessel and its viewers into passengers.”²³ By these means, the film is said to perform serious aesthetic and philosophical work:

If...the alienation of the spectator with respect to his experience, reflecting the elevation of doubt to an esthetic principle, may be said to characterize modernist sensibility as a whole...then film’s conversion of that principle to the uses of a formal dynamics gives it a privileged place as a medium centrally involved with the cognitive aspiration of modern art. The dissociative economy of film viewing heightens our perception of being physical to the level of apperception: one becomes conscious of the modes of consciousness.²⁴

The “dissociative economy of viewing” is achieved by training the spectator through disorientation tasks. Across an encyclopedic taxonomy of movements and perspectival shifts, like an airline hostess turning upside down and astronauts laboring in weightless space,²⁵ *2001* solicits perceptual reorientation and bodily adjustment over and over again. (*This*, and not a group of characters or plot, is what the film is “about.”) Demonstrating Jean Piaget’s thesis in developmental psychology that the ability to navigate within one’s body is not given but learned and hard-won,²⁶ *2001* is claimed to ultimately enable a kind of higher knowledge of the spectator’s body that is inseparable from the feeling of that body, “a knowledge which is

²³ “Bodies in Space,” 63. It may be intentional or a felicitous coincidence that a work of art converting its exhibition space into a vessel and its patrons into travelers is about as close to an analogue of driving the nighttime New Jersey Turnpike as one can get.

²⁴ “Bodies in Space,” 59.

²⁵ “Bodies in Space,” 60 and 62, respectively. In particular, she notes that the way zero-gravity environments makes simple tasks incredibly difficult for the astronauts (whose effort we are invited to feel in long focused pauses) makes embodied time palpable in a way similar to “task performance” in contemporary dance.

²⁶ Michelson includes a quote from Piaget on “structural formation” in an epigraph and two lengthy quotes to illustrate the kind of “sensory-motor habit formation” that *2001* is said to re-enact.

Like her phenomenological inspiration, Michelson puts a premium on twentieth century French psychology. This posits a need for science as an important third term (with art and philosophy) in Michelson’s criticism as it is for Greenberg’s, but in an opposite way. Greenberg sees art as proceeding *like* a modern science in its endlessly rigorous testing, and because of that process, art remains insulated from science. For Michelson, art tends to make embodied *proofs* of experience, complementary to scientific propositions.

carnal.²⁷ Michelson comes to the same conclusions regarding Morris's Minimalism (and both are likened to contemporary dance).²⁸ But whereas Minimalist sculpture achieves its ends through its opacity to any kind of representational or formal analysis—by being purely and simply *there* in front of a viewer—film can play with viewers' sense of orientation in space and time.

Michelson's goals of a more embodied and secular art criticism run parallel to her goals in film criticism. For film to be recognized as an equal to painting or sculpture, it required a critical apparatus that, she claims, had yet to develop any sophistication in America.²⁹ If the Morris catalog was a response to Fried and Greenberg's ocularcentric criticism,³⁰ the 2001 essay is a dialectical response to André Bazin—whose essay collection, *What Is Cinema?*, she had reviewed for *Artforum* a year earlier.

In that review, Michelson diagnoses Bazin's realist critical project as in need of being usurped, for two reasons. First, Bazin's phenomenological inspiration (taken, she claims, from

²⁷ "Bodies in Space," 63.

²⁸ Michelson argues that the sculptures' utter specificity and insistence on being seen as co-present objects (rather than as images) force a recognition of the specificity of our own bodies as detailed by the phenomenological method, "impelled by a recognition of the most profound and general sense in which our seeing is linked to the sense of ourselves as being bodies in space, knowing space through the body" (249). This recognition is likened to the New Dance of Yvonne Rainer et al. that breaks down the distinction between "virtual" or diegetic movement and "operational" movement (250).

²⁹ See Michelson, "What Is Cinema?," *Artforum* 6.10 (Summer 1968), 67.

³⁰ Michelson explicitly claims Fried's notion of "presentness" in modernism to be the aesthetic equivalent of Charles Sanders Peirce's notion of "firstness," an elusive quality that expresses a desire to return to theological foundations in a secular age: "That which leaps to the eye is the manner in which both 'firstness' as epistemological category and 'presentness' as aesthetic value preserve, for a secular age, the attributes of that logically pre-existent, absolute and timeless, real Presence called into question by Modernism. ...Absolute presentness being the attribute of Divinity, to experience 'the work in all its depth and fullness' as within 'a single, infinitely brief instant' is to dwell in Presence, in 'conviction' as in Revelation." "Robert Morris," 248. I take the implicit point of Minimalism and its "secularist impulse and thrust" (248) to be dissolving this fantasy of eternity, to direct the attention of a viewer to the viewer's own finitude.

Merleau-Ponty's essay, "Film and the New Psychology") is awkwardly fit into a Catholic doctrine of "'love of characters' and of 'reality as such,' 'unpenetrated artificially by ideas or passions.'" ³¹ Michelson charges that this love of things can only be justified by assuming a suspect ontological attachment of the filmed thing to the thing filmed (Bazin's famous assertion that the photograph of the object "*is* the object"); his ontological realism amounts to a gesture of faith. Michelson's solution to what she sees as Bazin's dead-end is to take the phenomenology further, to allow a focus on *experience* rather than a retrograde faith in *things*:

It seems, then, as though the intensified secularization of sensibility in a structuralist decade has, above all, provided a context for the restoration of the poetic dimension. In this context, phenomenology, no longer required to provide, in its mediation between mystical and secular imperatives, a rationale for a given *style*, should be free to inquire more deeply into the nature of cinematic *experience*. ³²

Second, Bazin's preference for a transparent film style prevents him from appreciating the very tradition of cinematic modernism that, Michelson argues, makes cinema the equal of painting or sculpture. Hinted at in Bazin's opposition to Eisenstein and early abstract film, this problem comes to a head with the 1960s American avant-garde. Revisiting Bazin's doctrines in her 1972 essay "Screen/Surface," Michelson finds two Americans who "argued for the bankruptcy of this orthodoxy [of conservative realism] and its outgrowth" ³³: Stan Brakhage and Robert Breer. Each filmmaker in his own way offers a critique of cinematic illusionism. Brakhage's abstract imagery, in its "attempt to eradicate the perspective built into [the camera] lens," serves as a

³¹ Michelson, "*What Is Cinema?*," 70.

³² "*What Is Cinema?*," 71, original emphasis. Michelson's criticism of Bazin's wish to access things-in-themselves, or the world as it is, is exactly analogous to her criticism of Fried's presentness.

³³ "Screen/Surface," *Artforum* 11.1 (September 1972), 61.

critique of cinematic space. Breer's "single-frame composition" style, in offering "another kind of filmic temporality" critiques cinematic time.³⁴

In these critiques of cinematic space and time, we ironically see no sustained treatment of motion in its own right. The key to *Artforum's* theoretical disavowal of figural animation from a pedigree of modernism lies in Michelson's choice of Breer as exemplar. While Breer is often considered an animator,³⁵ his films show little interest in mimicking the natural appearance of movement through artificial materials; his aesthetic is based around *rupturing* or *destroying* the appearance of movement that we expect in a cinematic image.³⁶ In an interview for *Film Culture*, Guy Côté attempts to liken Breer's "abstract" animation to that of McLaren, and Breer actively resists this characterization:

COTÉ: We speak of abstract films, and I can't help thinking of Norman McLaren's brand of abstract films. In a sense, they are not really abstract at all, because he often gives to non-objective shapes the semblance of human movement. He's an actor who creates shy lines and aggressive blobs, who imagines dynamic performances on the screen which mimic human drama.

BREER: I think that the reproduction of the semblance of natural movement is but one of the many possibilities of cinema. For me, the cinema medium is just an arbitrary thing which was invented that way to provide for the reproduction of natural movements. What

³⁴ All quotes from "Screen/Surface," 62.

³⁵ Breer, for example, is included in Robert Russett and Cecile Starr, eds., *Experimental Animation* (New York: Da Capo Press, 1988 (1976)) and in Ralph Stevenson's *The Animated Film* (San Diego and New York: A.S. Barnes & Co., Inc., 1981 (1973)). George Griffin lists him among Hans Richter and Norman McLaren as a pioneer "whose work has made the very term *cartoon* inappropriate." See Griffin, "Cartoon, Anti-Cartoon," in Gerald Peary and Danny Peary, eds., *The American Animated Cartoon: A Critical Anthology* (New York: Dutton, 1980), 263.

³⁶ Andrew Johnston has recently called this trademark of Breer's "disintegrated animation." In disintegrated animation, "the perceptual limits that are usually utilized to generate a fluid image of movement are exposed through ruptures in continuity, either at the hands of the juxtaposition of discrete images in normal cinematic temporal progression or a play with technologies of viewing." Johnston, *Pulses of Abstraction: Episodes from a History of Animation*, PhD. dissertation (University of Chicago, 2011), 131.

My point is not that Robert Breer is not really an animator, but that he does not characteristically deal in impressions of animated movement (i.e., creating movements that look mechanically caused or anthropomorphically willed).

I'm interested in is to attack the basic material, to tear up film, pick up the pieces and rearrange them. I'm interested in the domain between motion and still pictures. It seems to me that in animation, particularly, the search for the reproduction of natural movements plays far too big a role. Whether stylized or not, I don't think one needs to conceive of movements as related directly to those observed in reality. There's more to cinema than creating the illusion of psychologically anthropomorphic movements.³⁷

Michelson's celebration of Breer's explosions of movement thus opens up frame-by-frame manipulation of cinematic imagery as being worthy of modernist criticism *while closing off the same possibility for animated movement*, of the kind that was being explored by the International Association of Animated Film (ASIFA). Michelson does not even call Breer's work "animation" but, more to the point, "single-frame compositions," a term which emphasizes the assaultive *lack* of visible movement between frames that permeates his work.³⁸

In other words, under the terms by which Michelson defines cinematic modernism, the viewer's experience of space and time can be invoked and used as an artistic and philosophical tool; yet the visual impression of motion is not quite counted as an "experience" to be tested in the multivalent ways that space and time are counted. Instead, movement is a mere effacement of film's material basis (i.e., the difference between frames) that manifests itself in experience as

³⁷ Guy L. Coté, "Interview with Robert Breer," *Film Culture* 27 (1962/63), 17-20.

³⁸ Michelson also mentions Breer as an exemplar of the American avant-garde in "Film and the Radical Aspiration," never so much as hinting that he functions anything like an animator. Instead, Michelson sees Breer finding inspiration from contemporary painting toward a condition of filming full of staggered discrete frames that almost mold into the instantaneous perception of a single object (a condition which necessarily precludes the impression of something moving):

[Breer] has an immediacy produced by the elimination of narrative as plot, or plot re-conceived as progress, involving a complex visual logic, high speed of images, the use of subliminal vision. All these factors articulate a cinematic aspiration toward the condition of the "object" instantly apprehended, an aspiration shared by our most advanced painting today. Rather than fusing in a con-fusion, this work proposes a situation in which film & painting may converge within a tradition of formal radicalism. These films, in their intransigent autonomy, make an almost wholly plastic use of reference & allusion, by no means excluding extra plastic resonances, but animated by a sense of structure as progress-in-time so absolute & compelling that very little else has room or time enough in which to "happen." ("Film and the Radical Aspiration," 419.)

an on-off phenomenon: either something moves or it doesn't. Hence, the slow zoom of Michael Snow's *Wavelength* (1967) distills the expectations of narrative in classical film to an absolute forward thrust that ultimately "figures the view" of Husserl on the horizons of past and future that always accompany the "Now of perception."³⁹ it acquaints us with the nature of our experience of time. Hence also, Dziga Vertov's *The Man with the Movie Camera*, through its backward analysis of movement, educates us on the mental contours of our own expectations of causality:⁴⁰ it upends the recorded motion of the camera, and our recognition of the "real" motion plus its distortion gives us a self-conscious understanding of cause-effect relations. But under Michelson's assumptions, movements created from scratch (rather than recorded) to move in *recognizable yet impossible* ways (abstracted rather than absolutely abstract), cannot be said to yield any carnal knowledge. This was the analytical crack through which Dunning, the Hubleys, and others fell.

Because animated movements hint at representational qualities in the things animated (creating the impression of quasi-physical or biological forces), it might be said that they necessarily suggest what Michelson calls elsewhere, citing Suzanne Langer, a "virtual space": a closed system of aesthetic rules necessarily removed from our own bodily orientation.⁴¹ Cinema deals in sensory impressions that share no physical space with us, making virtual space

³⁹ The key sentence in full reads, quoting Husserl's *Cartesian Meditations*: "That steady movement forward, with its superimposition, its events passing into the field from behind the camera and back again beyond it, figures the view that "to every perception there always belongs a horizon of the past, as a potentiality of recollections that can be awakened; and to every recollection there belongs as an horizon, the continuous intervening intentionality of possible recollections (to be actualized on my initiative, actively, up to the actual Now of perception."" Michelson, "Toward Snow: Part One," *Artforum* 9.10 (June 1971), 31.

⁴⁰ See "From Magician to Epistemologist: *The Man with the Movie Camera*," *Artforum* 10.7 (March 1972), 60-72. Noël Carroll would expand on this insight in "Causation, the Ampliation of Movement and Avant-Garde Film," in *Theorizing the Moving Image* (Cambridge: Cambridge University Press, 1996), 169-186.

⁴¹ Michelson, "Robert Morris," 248-249.

something of a natural problem. Film can overcome this problem by either making use of its virtuality in creative ways that force wholesale reorientations of the body (as *2001*'s vertiginous travels accomplish), or destroying that space entirely in favor of other impressions (as the 1960s and 1970s avant-garde sought to do). The new animation did neither. By and large, it did not take pleasure in rupturing the impression of movement; nor did it fold its movements into a whole trajectory of space and time that could sufficiently reorient a spectator.

In the search for direct impressions on the spectator which bypass a logic of illusionism, avant-garde criticism inherited the legacy of realist film theory even as it derided it. Rosalind Krauss criticizes Cavell's then-just-published *The World Viewed* not because his ontology of film by definition excludes animation, but because he neglects the self-consciously modernist investigations of cinema by the Soviet montage movement and Godard.⁴² By changing the working material of film from "reality as such" to "experience as such," avant-garde criticism retained a focus on terms inherited from live-action film (camera movement, editing, etc.), privileging its uses in self-conscious or destructive ways.

Artforum's subsequent coverage of film, growing more and more frequent each year, essentially followed the line of analysis laid down by Michelson. The 1971 special issue on film sketches a modernist landscape of structuralist filmmakers Hollis Frampton and Ken Jacobs, the flicker films of Paul Sharits, and the intellectual exercises of George Landow. In each case, the impression of movement is treated as an effacement of the differences between frames of film.

⁴² Krauss notes Cavell as an exception to the prevailing rule of modernist criticism not taking film seriously, but proceeds to take Cavell to task on ignoring modernist film: "One modernist, however, has dealt with film: the philosopher Stanley Cavell in his book *The World Viewed*. But in a work dealing in part with the history of film culture, Professor Cavell manages to omit any reference to Russian film of the 1920s, and in the other part dealing with modernism in cinema, he ignores experimental film entirely, speaks pejoratively of Godard, and presents as leading modernists Bergman & Antonioni." ("A View of Modernism," 51N10.)

Mere movement is not enough to provoke a re-training of the viewer's perceptual apparatus: movement must either be absent or accompanied by repetition or inversion. Ken Jacobs questions the illusion of movement with freeze frames in *Tom, Tom, the Piper's Son* (1969), a "brilliant lesson in perception and perception-training."⁴³ Paul Sharits's *Piece Mandala / End War* (1966) scrambles the order of an action of a couple making love by re-arranging the frames and interspersing them with blank color frames.⁴⁴ George Landow's *Film That Rises to the Surface of Clarified Butter* (1968) animates a hand-drawn demon in one segment of the film, only to intersperse the segment with footage of a live-action girl in negative and repeat the sequence with variations three times. Filmmaker/theorist Hollis Frampton overtly echoes Breer's dissatisfaction with the mere impression of motion in his statement, "For a Metahistory of Film." Frampton writes that the appearance of motion is one small domain within the infinite possible relations between successive frames. Movement only gives us the movies—*film*, on the other hand, is "whatever will pass through a projector."⁴⁵

In 1976, Michelson and Krauss broke away from *Artforum* to continue their modernist pursuits in their co-founded journal *October*, where analyses of film mingled freely with painting, sculpture, photography, and video art. Such was also the case with *Screen*, a journal which took up more structuralist means toward a political project of unseating cinematic illusionism. Both journals became important sites of film theory. In each case, the concerns of

⁴³ Lois Mendelson and Bill Simon, "Tom, Tom, the Piper's Son," *Artforum* 10.1, 52.

⁴⁴ See Regina Cornwell, "Paul Sharits: Illusion and Object," *Artforum* 10.1, 56-62.

⁴⁵ Frampton, "For a Metahistory of Film: Commonplace Notes and Hypotheses," *Artforum* 10.1, 35.

an avant-garde bypassed those of animation.⁴⁶ Even as a will to serious criticism expanded “the movies” into “film,” and even as “cartoons” expanded into “animation,” the divide remained. Cartoons were still not movies.

⁴⁶ *Film Culture* formed an exception to this, retaining a commitment to filmmakers who continued what P. Adams Sitney called the “cinographic (that is, animated, hand-painted)” tradition. See Sitney, *The Film Culture Reader*, 5.

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